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Original Articles

THE ELIMINATION OF CHLORIDS IN NEPHRITIS.

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CHICAGO.

Widal and Javal[1] recently called attention to the inability of many nephritics to eliminate sodium chlorid in a normal manner. The salt retained in the tissues required a certain amount of water to maintain it in the proper molecular concentration, thus leading to edema; they offer this as the probable cause of dropsy in nephritis. This chlorid retention was found chiefly in acute and chronic parenchymatous nephritis, and especially in patients who were edematous. This retention was not found in the interstitial form, and we know that when edema develops in these cases it is usually of cardiac origin. They, furthermore, decided that the impermeability of the kidney to urea and salts did not necessarily go hand in hand, as in the terminal period of Bright's disease there may be marked retention of chlorids, but none of urea, phosphates or sulphates. They report a case of uremia, with daily elimination of 28 grams of urea, but only 0.39 grams of sodium chlorid. For this reason they consider the chlorid elimination as a better index of the functioning power of the kidney than the excretion of urea, and that the unfavorable progress of a case is associated with reduced chlorid elimination. With the chlorid retention there is increased elimination of sulphates and phosphates, and as the chlorids increase these salts diminish.

Only small amounts of sodium chlorid are essential for the animal economy. According to Bunge, a person on a mixed diet requires daily 1 to 2 grams; most people, however, consume 10 to 20 grams. The excess of chlorid is eliminated chiefly through the kidneys. The normal feces contain less than a gram daily, but as a result of diarrhea this may be increased to 4 or 5 grams. The skin eliminates on an average 1,000 c.c. of sweat containing 1 to 2 grams of sodium chlorid. The total daily elimination may, of course, be greatly increased by sweating, and some recent results point to increased sodium chlorid in the perspiration of patients with chlorid retention. In diseases associated with polyuria, as diabetes insipidus or interstitial nephritis, the sodium chlorid intake and excretion may be greatly increased, often reaching 25 to 30 grams daily.

The view is generally held that when a large excess of sodium chlorid is administered to a healthy person this rapidly appears in the urine, the maximum excretion occurring three to four hours after ingestion. Since the work of Widal, further study has been made[2] of the normal kidney and it has been found that the daily elimination of sodium chlorid suffers wide daily variation without any apparent cause. Koziczkowsky found on a fixed diet the daily elimination varied from 9.9 to 23.7 grams in one case and from 6.8 to 14.4 grams in another. He gave people with apparently healthy kidneys an additional 10 grams of sodium chlorid daily for three successive days, having previously estimated the daily output, and reports a chlorid retention of from 18 to 25 grams.

Patients with acute or chronic parenchymatous nephritis, when given, in addition to their usual diet, ten grams of salt, show only moderately increased chlorid in the urine. Except in very severe cases, the amount of urine is increased. When this increased ingestion of salt is continued for several days, the patients gain in weight due to the developing edema, the amount of albumin in the urine is increased, headache, nausea and stupor may develop; in short, a condition resembling uremia. Widal and Javal were able to make the edema appear and disappear at will by increasing or withdrawing the chlorids. The weight of one patient fluctuated from 56 to 60 kilos. The edema rapidly disappeared when the patient was placed either on a milk diet or on meat, bread and potatoes. The addition of ten grams of salt to either diet interfered with improvement. During the disappearance of the edema the daily amount of chlorids eliminated exceeded the intake 3.3 grams. The amount of albumin also decreased from 15 to 3.38 grams daily. When ten grams of salt was added to the milk daily, the urine decreased in amount and the daily retention of chlorids was 4.57 grams, the patient increasing 2.1 kilos in weight, the albumin increasing from 2.4 to 12.12 grams. The patient was then placed on a diet containing 400 grams of meat with bread and 2,500 c.c. of fluids. Within eleven days the weight decreased 3.7 kilos and the albumin had fallen to 0.72 grams daily, the edema reappearing when the salt was added to the diet. Numerous investigators have verified the above results. Koziczkowsky reports marked increase in the amount of chlorid in the various organs of patients with uremia. Courmont,[3] in three cases of acute or subacute nephritis, injected subcutaneously normal salt solution. After the second day the urine became scant, and two of the patients developed

1. Widal and Javal: Presse Médicale, 41, 1903.

2. Only a few references are appended. A complete bibliography may be found in *Centralblatt f. innere Medizin*, 1905, No. 1. Most of the articles on the subject in foreign journals have been repeatedly summarized in the Foreign Current Literature Department of THE JOURNAL. Acherd: "Retention des chlorures et pathogenie de l'oedem," Soc. Méd. des Hôp. de Paris, July 31, 1903. "Hyperchloruration et déchloruration," ibid. Nov. 20, 1903. Achard and Loeper: "Rétention des chlorures dans les néphrites." Soc. Méd. des Hôp. de Paris, May, 1903. Chauffard: Soc. Méd. des Hôp., Paris, June 3, 1904. Illyes und Kövesi: Berlin. klin. Wochft., 1902; 1904, Nos. 24, 25 and 26. Strauss: Zeitft. für klin. Med., vol. xlvii.

3. Courmont: Lyon Médical, ci, 1903.

uremia. Nagelschmidt[4] produced an artificial nephritis in dogs and demonstrated chlorid retention with increase of salt in the blood. Castaigne[5] demonstrated that in animals with nephritis moderate amounts of sodium chlorid would double or triple the amount of albumin. He also reports that in patients with nephritis, without albuminuria, after the administration of salt, albumin appeared in the urine.

Kovesi has recently verified Widal's results and given some interesting additional information. Patients with chlorid retention increased in weight and became more edematous after ingestion of excessive amounts of salt, although the fluids taken during this time were not increased and the daily amount of urine not diminished. It must be that the elimination of water by other channels has been lessened. There was no increase in the liquids passed in the stool and there only remain the skin and lungs. He believes as a result of chlorid retention there is a lessening of the invisible perspiration. The amount of evaporation which takes place from the surface of the body is dependent not only on the moisture and temperature of the surrounding air, but also on the molecular concentration of the body fluids. The higher the osmotic pressure the less water is given up.

Soon after Widal's communication I began investigating the subject. The cases for study were obtained chiefly from the wards of Cook County and the Presbyterian hospitals. While no attempt was made to determine the exact intake of salt, the patients were kept on a fairly uniform diet during the period of investigation. In some cases this was milk only; in others, the light ward diet. The chlorids were estimated by the Volhard method. When possible, the patients were weighed daily. The sodium chlorid was administered at first in wafers, but, as this often produced nausea, it was later given in solution. The following method was pursued: The chlorids were estimated daily for nine consecutive days. The first three days the patient had merely the chlorids contained in his food; the following three days he received daily an additional ten grams; then the three following days merely the chlorids in his food.

In the accompanying table the total urine for each of the three-day periods is noted, the total chlorid in each period, the grams of chlorid retained at the end of the period when extra salt was given and the percentage of it in the urine during each period. During the second period ten grams of salt were administered daily, except in the cases indicated by an asterisk, where only five grams were given.

Two cases of acute nephritis were examined: one postdiphtheric with blood, epithelial and granular casts, but only a trace of albumin. There were marked uremic symptoms and moderate edema. The other was of six weeks' duration, the urine containing a large amount of albumin, many granular and epithelial casts, very slight edema. These patients were kept on an exclusive milk diet, consisting of 1,000 c.c. of milk and 250 c.c. of cream. One patient had a chlorid retention of 10.7, the other 24.8. In both there was a visible increase in the edema. One patient was weighed, gaining three pounds during the period, when extra chlorid was given, and losing it quickly after the salt was discontinued. In one case less urine was passed during the period of extra chlorid than in the preceding or following period. The percentage of chlorid in the urine was increased following the administration of the salt.

Case.		Urine, three day periods, c.c.	Chlorids, gms.	Retained chlorids, gms.	Gms. chlorids per liter.
1. Acute nephritis, moderate edema.	1	1680	13.58	....	8
	2	2050	18.14	25.44	8.9
	3	2190	15.41	....	7.01
2. Acute nephritis, marked edema	1	6950	31.8	....	4.6
	2	6300	36.14	*10.66	5.7
	3	7500	19.5	....	1.6
3. Chronic Parenchymatous nephritis; marked edema; myocarditis	1	1150	1.	....	.86
	2	970	1.86	29.14	1.91
	3	2380	2.32	....	.97
4. Chronic parenchymatous nephritis; marked edema	1	4050	20.	....	4.9
	2	4100	35.07	14.93	8.5
	3	3360	18.52	....	5.6
5. Chronic parenchymatous nephritis; marked edema	1	5090	17.55	....	3.4
	2	5300	38.64	8.91	7.1
	3	7440	31.66	....	4.2
6. Chronic parenchymatous nephritis; slight edema	1	3500	30.	....	8.5
	2	3800	40.	20.	10.5
	3	3725	29.25	....	7.8
7. Chronic parenchymatous nephritis; marked edema	1	4600	28.06	....	6.1
	2	3800	24.96	33.1	6.5
	3	2950	20.51	....	7.0
8. Chronic parenchymatous nephritis, probable secondary contracted kidney; no edema.	1	4050	33.30	....	8.2
	2	5580	55.	*6.7†	9.8
	3	4270	21.75	....	5.1
9. Chronic parenchymatous nephritis; no edema	1	6950	31.8	....	4.6
	2	6300	36.14	*10.60	5.7
	3	7500	19.5	....	2.6
10. Normal	1	2340	37.41	....	7.
	2	5970	44.75	22.66	7.5
	3	5040	37.45	....	7.4
11. Normal	1	6870	48.8	....	7.1
	2	9120	67.4	11.4	7.3
	3	7090	56.4	....	7.9
12. Normal	1	7580	37.62	....	4.9
	2	7780	54.7	12.92	7.0
	3	5520	44.4	....	8.0
13. Normal	1	3000	42.84	....	14.28
	2	4000	49.26	23.6	12.3
	3	3300	36.76	....	11.1
14. Myocarditis; general edema.	1	3906	24.	....	6.1
	2	9840	78.	24†	7.9
	3	2108	13.	....	6.1

* Patients received five grams extra chlorid daily.
† Eliminate in excess of chlorids ingested.

Seven patients with chronic parenchymatous nephritis were examined. Six had more or less edema. The patient without edema had probably a secondary contracted kidney. The six patients with edema all had a chlorid retention varying from 8.9 to 29.24 grams during the three days of extra salt. The secondary contracted kidney eliminated 6.7 grams more chlorid than was ingested. In two cases the urine decreased in amount during the period of extra chlorid. Two patients showed marked increase in the edema and both complained of increased headache and stupor. One patient was taking Basham's mixture. A later test was made, with patient taking two grams of diuretin daily, with much better chlorid elimination. The patient with the least chlorid retention died; the one with the greatest retention left the hospital much improved. In two cases with marked edema the albumin was estimated by the Purdy method and the effect observed of potassium acetate, potassium neutral phosphate and theocin on the chlorids and albumin. The results were practically identical in the two cases. During the period of extra chlorid the albumin was decidedly increased. None of the remedies used increased the elimination of chlorid.

Two patients with uremia were examined. Both of these died before the tests were completed, so do not appear in the table. In both cases the urine was scant

4. Nagelschmidt: Zeitft. für klin. Med., vol. 42.
5. Castaigne and Rathery: Arch. de Méd. expér. et d'anat. path., vol. xv, 1903.

and the daily amount of chlorids less than two grams. Following the administration of salt, the urine was lessened, one case from 500 to 240 c.c., and scarcely any of the extra chlorid appeared. The edema was decidedly increased and the patient's condition worse.

A patient with myocarditis, having fluid in the pleural, pericardial and abdominal cavities, showed marked increase in the daily urine following the administration of chlorids, and excreted 24 grams, or 8 grams daily more chlorid than was ingested. This patient showed actual improvement, which continued after the chlorid was discontinued. This might be considered an increased activity of the kidney due to the ingestion of large amounts of chlorid, analogous to the results of Claude, who found increased elimination of urea following the use of chlorids, or the results of Roque and Lemoine, who found increased activity of kidney to the phloridzin test after the use of common salt. In a single case of this sort, however, no conclusion should be drawn. While we are unable to disprove that excessive sodium chlorid stimulates kidney activity in certain cases, it appears doubtful, especially when we consider its action on the healthy kidney.

Four patients without apparent heart or kidney trouble were tested. All these showed a degree of chlorid retention almost, if not quite, equal to the nephritics. This difference might be mentioned in two, viz., the retained chlorid was eliminated within 48 hours after its discontinuance, while in nephritics it took place more gradually. In each case the administration of chlorids caused a marked increase in the amount of urine. Following the ingestion of the salt, the percentage of chlorids in the urine was increased, not, however, to such a degree as in the nephritics. No edema resulted. Assuming that the salt was absorbed from the intestinal tract, it must have remained in the tissues associated with sufficient water to maintain the proper dilution. In other words, these patients had an undemonstrable edema. The tissues of the nephritics were already water-logged so that any increase in edema was readily observed. In support of this view one of the patients was weighed daily and showed an increase in weight of 2¼ pounds following the administration of the chlorids. Novecourt and Vitry's experiments on nurslings is corroborative of this view. They administered daily for a period of seven days 0.25 to 1 gram of sodium chlorid, and found a greater increase in weight than for the same period on the same amount of food, but without the additional chlorid. They believe this is due to improved nutrition, but it is probably the result of water retention.

A summing up of the evidence would indicate that the chlorid retention in moderately severe nephritis is not greater than in the normal kidney. The terminal stages of nephritis, however, are characterized by very marked impermeability of the kidney to sodium chlorid. This difference, however, exists: in nephritics there is a visible increase in the edema, in the healthy individual there is no detectable edema. It is not necessarily true that a chlorid retention, after moderate excess of salt, exists in every healthy individual, but reports from various writers indicate that such is the rule.

Another phase of the question, and it would seem a much more important one, is the increase in the albuminuria and development of uremia symptoms following excessive chlorid ingestion. The view that the so-called uremia of nephritis is, in reality, a chloremia has little support. It appears that the increased cerebral edema is the more probable explanation. From a therapeutic standpoint, whatever the final decision regarding the impermeability of the nephritic kidney to chlorid, there is no doubt that excessive salt should be avoided, as it causes not only water retention, but by increasing the osmotic pressure of the blood lessens perspiration and the amount of water lost by respiration. Two grams of sodium chlorid daily are sufficient for the animal economy. Milk contains from 1.2 to 1.7 grams per liter; 100 grams of bread, on an average 1.3 grams; 1,000 grams of beef, 1.15 grams. Widal reports disappearance of edema and general improvement on a diet consisting of meat, 400 grams; potatoes, 1,000 grams; sugar, 100 grams; butter (unsalted), 80 grams; fluids, 2,500 c.c. This diet contains only 1.5 grams of chlorid. Especially to be avoided are the soups and broths, as they contain large amounts of salt, the broths at the Cook County Hospital containing 11.3 grams per liter, and many patients drink 500 c.c. of this daily. The use of subcutaneous injections of salt is contraindicated, as it may favor the development of uremia. I do not believe that the degree of chlorid retention is necessarily an index of the extent of kidney incompetency. Two cases of nephritis with a mild degree of retention died, while the patient with the highest degree of retention left the hospital much improved.

CONCLUSIONS.

In patients with moderately severe nephritis associated with edema, the ingestion of large amounts of sodium chlorid is followed by a chlorid retention. The patient gains in weight, the edema becomes more marked, the albuminuria increases and symptoms may develop resembling uremia.

In patients with severe nephritis, and especially those with uremia, chlorid retention is very marked, as scarcely any of the extra chlorids administered are eliminated.

In individuals with apparently healthy kidneys, following the ingestion of sodium chlorid, there is a chlorid retention equal to that of mild nephritis. The individual gains in weight, but there is no visible edema, no albuminuria and no uremic symptoms appear.

THE PHARMACOLOGY OF DIETHYLOXYACETYL UREA.*

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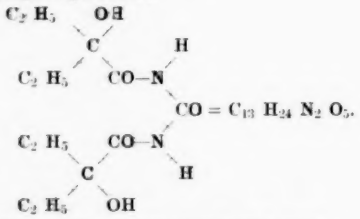
Some weeks ago my attention was called to a new group of chemical bodies belonging to the methane series. According to A. H. C. Heitmann and Erik Clemmensen, the discoverers, they are condensation products of urea and the various oxyacetic acids. A consideration of the chemical structure of these compounds led to the belief that all would possess considerable hypnotic power, but the ethyl compound was thought to be the more promising for therapeutic purposes. The originators accordingly prepared and placed at my disposal sufficient quantities of the ethyl derivative in its pure state, and a little later its sodium salt, to undertake a series of animal experiments to demonstrate its pharmacologic properties.

Perhaps the most desirable chemical name that can be given to the compound, as indicating its structure, is the one mentioned in the title of the paper, diethyloxyacetyl urea. The chemical formula is given by

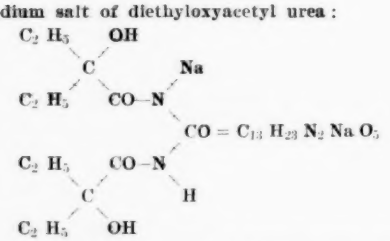
* Read before the central branch of the Am. Physiological Society, March 29, 1905, at Chicago.

Clemmensen and Heitmann as $C_{13}H_{24}N_2O_5$, with the following structural formula:

1. Diethyloxyacetyl urea[1]:



2. The sodium salt of diethyloxyacetyl urea:



A great deal of attention has been given by pharmacologists to the relation between chemical structure and physiologic action, with the result that one may predict beforehand in many instances, with a greater or less degree of certainty, the effects that will be produced on animals by the administration of chemical substances with definite structural formulæ. Schmiedeberg, considering the formula of urea $CO(NH_2)_2$, concluded that by replacing one of the amidogen groups with an ethyl alcohol radical the resulting compound $CO(NH_2)(C_2HO_5)$ would possess the desired hypnotic action.

The ethyl group would depress the cerebral centers, while the amidogen group, by its stimulating action, would correct a too pronounced depression of the respiratory and other important medullary centers. This compound Schmiedeberg called urethane. Tests of it on rabbits showed it to be almost an ideal hypnotic, but, when administered to human beings, it was found to require very large doses, and even then was not certain in its effects. Apparently, the stimulating effect of the amidogen group was too great or the depressant effect of the alcohol group too slight for the changed relations between the size of the cerebral substance and that of the lower portions of the central nervous system of the human being as compared with the rabbit. Computing the amount of C_2H_5 and the nitrogen in urethane, we find that they constitute 31 per cent. and 15 per cent., respectively, of its molecular weight. Emil Fischer and J. v. Mering[2] called attention to urea compounds of the fatty-acid series, and proposed diethylmalonyl urea as a hypnotic. This compound contains 31.5 per cent. C_2H_5 and 12.5 per cent. nitrogen, very nearly the same percentages as are found in urethane. Computing the percentage of C_2H_5 (the ethyl radicals) and nitrogen in the above formula for the diethyloxyacetyl urea, we find it amounts to 40 per cent. and 9.6 per cent., respectively, there being a considerable increase in the percentage of the ethyl radicals and a decrease in the percentage of the nitrogen as compared with urethane. Hence the supposition that it would be more active as an hypnotic than urethane, possibly containing just the right percentage of the depressing alcohol radicals and the stimulating nitrogen compounds to produce as desirable hypnotic action for higher animals and human beings with their relatively large amount of cerebral substance as urethane for rabbits with their comparatively small amount of cerebral substance. While predictions of this kind have often been wofully misleading, further experiments and clinical trials show that the reasoning in the above comparison is worthy of serious consideration.

The diethyloxyacetyl urea is a clear, transparent, slightly soluble, oily liquid, sp. gr. 1.1107, with a peculiar characteristic etherial odor and taste. It is soluble in about twenty parts of water, and is quite soluble in most of the organic solvents, e. g., in alcohol, ether, chloroform, etc. The sodium salt forms beautiful flake-like crystals, which are very soluble in water and have a mild peculiar taste. This latter compound contains 11 per cent. of sodium, and on account of its great solubility, promises to be of more importance than the mother compound. Experiments show that both act in essentially the same manner, but the time has been too short and the supply of the drug too limited to fully complete the investigations. Consequently, this communication should be regarded as a preliminary report to be followed later by a more comprehensive paper dealing with the whole group of urids of the group of oxyacetic compounds.

As Clemmensen and Heitmann are now preparing an exhaustive chemical paper on the subject, I shall not take up the method of preparing these bodies or discuss their chemical relations, but will simply state that they are condensation products of urea and the various oxyacetic acids.

ANTISEPTIC AND GERMICIDAL PROPERTIES.

A series of culture tests, employing *B. pyocyaneus* as a test organism, showed that the drug and its sodium salt possess very slight antiseptic and germicidal properties.

TOXICITY.

Several series of experiments using frogs and guinea-pigs showed that the compound is but very slightly toxic. The minimum fatal dose for frogs, when the substance was injected into the abdominal lymph sac in physiologic salt solution, was 0.005 to 0.006 per gram body weight (Table 1.); for guinea-pigs when administered subcutaneously, 0.8 per kilogram body weight; and for guinea-pig per stomach, 0.8 per kilogram body weight (Table 2). The series of experiments were repeated several times. The tables are typical of the detailed results obtained when the substance was administered in the several ways mentioned.

TABLE 1.—SODIUM SALT OF DIETHYLOXYACETYL UREA. TOXIC DOSE FOR FROGS WHEN INJECTED INTO ABDOMINAL LYMPH SAC.

Number.	Weight.	Dose per Gm.	Result.
1.	27	.004	Lived.
2.	35	.005	Lived.
3.	17	.005	Lived.
4.	37	.005	Lived.
5.	31	.005	Died.
6.	25.5	.006	Died.
7.	18.5	.006	Died.
8.	19	.006	Died.
9.	23	.006	Alive.
10.	34.5	.007	Died.
11.	28.5	.008	Died.
12.	37	.009	Died.
13.	34	.010	Died.

Minimum fatal dose per gram body weight .006.

In a similar manner the toxic dose for the mother compound was found to be .005 per gram body weight.

1. I shall hereafter call this "the drug," as we have no short name for it. Since the paper was written the name Hypnotal has been provisionally adopted.

2. Die Therapie der gegenwart, March, 1903.

Frogs.—A series of frogs were injected with small quantities of the drug in the abdominal lymph sac. Very promptly the hypnotic action of the drug was shown, the animals becoming very sluggish, the head falling to the bottom of the cage, but they could be aroused by pinching the toes, when reasonable quantities of the drug had been employed.

Gold Fish.—Small gold fish were immersed in solutions of the drug in well-aërated river water, and it was found that their movements became more and more sluggish, until at the end of about fifteen minutes they would float to the surface. In most instances the fish did not show a stage of excitement, as so often occurs when chloral and similar chemicals are used. After a time all respiratory movements of the gills ceased, but, if the fish were placed in fresh water before the entire cessation of respiratory movements, complete recovery occurred in an hour or two. Recovery was hastened if the fish were placed for a few minutes in a dilute salt solution, and then in the aërated river water.

TABLE 2.—DIETHYLOXYACETYL UREA. TOXICITY FOR GUINEA-PIGS WHEN ADMINISTERED PER STOMACH.

Number.	Weight. Average.	Dose per Kilo.	Per Cent. Sol.	Result.
1	500 gms.	0.5	10	Lived.
2	500 "	0.6	10	Lived.
3	500 "	0.6	10	Lived.
4	500 "	0.7	10	Lived.
5	500 "	0.7	10	Lived.
6	500 "	0.7	10	Lived.
7	500 "	0.8	10	Died.
8	500 "	0.8	10	Died.
9	500 "	0.9	10	Died.
10	500 "	1.	10	Died.
11	500 "	1.2	10	Died.

Minimum fatal dose per kilo 0.8 grams.
The toxicity was found to be substantially the same when the drug was given subcutaneously.

Rats.—A number of gray rats were caught in the stables, and, as they were very wild, were considered desirable subjects for experimentation. Accordingly, a series of them were injected subcutaneously with various doses of the drug, and within a very short time the animals lost their ferociousness, and were soon sleeping quietly in the bottom of the cage. Here again it was possible to arouse them without any great difficulty, but as soon as they were allowed to remain quiet they quickly went to sleep again. The following day they were found as untamable as in their natural condition. They were then destroyed by the use of illuminating gas, and post-mortem examination showed but little irritation at the point of injection.

Guinea-Pigs.—A large number of these animals, weighing from 480 to 500 gms., received the drug subcutaneously and per stomach. They were found to be less susceptible to the hypnotic influence of the drug than rats, dogs or frogs. The animals occasionally, when large doses were given, showed a period of excitement similar to that produced by chloroform, ether, etc., and only became unconscious when very large doses were administered. In a number of instances the animals were destroyed with illuminating gas, and evidence of inflammation searched for at the point of injection. Here, again, as in the case of the rats, very slight reaction had occurred.

GENERAL ACTION ON TEMPERATURE, RESPIRATION AND PULSE.

A series of twenty dogs of different weight and breed were used for the purpose of determining the general action of the drug when administered to the animals in various ways: per stomach, per rectum, subcutaneously, intraperitoneally and intravenously. All the experiments showed conclusively that the compound possesses decided hypnotic properties, that in reasonable doses it did not have much influence on temperature, respiration and pulse. Table 3 is typical of the results obtained, indicating in detail the action of the drug on one of these animals. One characteristic of the action of the drug, which was always particularly notable, was the ease with which the animals could be awakened even when very deeply asleep, and, when so aroused, they readily partook of food and drink and the excretory

TABLE 3.—SODIUM SALT OF DIETHYLOXYACETYL UREA. EXPERIMENT 16. MARCH, 22, 1905. DOG. WEIGHT 14 K.

Time.	Temperature.	Respiration Rate.	Pulse rate.	Remarks.
1 p. m.	103.	16	114	Normal.
1:30 "	102.8	14	110	Normal.
2:00 "	. . .	. .	. .	2.8 c.c.; 50 per cent. of the sodium salt of diethyloxyacetal urea in gelatin capsule per stomach.
2:30 "	102.4	18	124	Drowsy.
3:30 "	103.3	17	120	Sleeping soundly but can be readily awakened.
4:30 "	101.9	16	108	Sleeping soundly but can be readily awakened.
5:30 "	102.	16	110	Awake, but still remains drowsy. Can walk readily without incoördination.
				March 23.
8:30 a.m.	101.8	18	100	Playful. Ate and drank during night. Defecated and urinated.
9:00 "	. . .	. .	. .	5.6 c.c. 50 per cent. sol of the drug given as before.
10:00 "	101.1	16	100	Becoming drowsy. Defecated.
12:00 "	101.3	18	106	Sleeping soundly, awakened with some difficulty.
1:00 p.m.	100.8	17	104	Sleeping soundly. Walks without difficulty when aroused, but goes to sleep at once when undisturbed.
3:00 "	100.8	18	90	Sleeping soundly.
4:00 "	101.	18	88	Sleeping, but awoke when disturbed, and walked about without difficulty.
6.00 "	100.6	16	90	Sleeping but was awakened and put in cage for the night. Ate and drank before going to sleep again.
				March 24.
8:30 a.m.	. . .	. .	. .	Sleepy, but when aroused ate and drank readily. Defecated during night.
9.00 "	102.	18	85	Sleeping, but can be easily aroused.
10.00 "	102.2	16	89	Given 9.4 c.c. 50 per cent. solution of the sodium salt of the drug as before.
11:30 "	101.	16	80	Sleeping, but can be readily awakened.
1:30 p m.	102.6	20	80	Sleeping. Awakes readily when disturbed, but shows some incoördination.
4:30 "	100.4	16	104	Sleeping soundly. Awakens readily and walks to his cage. Some incoördination.
				March 25.
1:00 a.m.	100.5	12	76	Sleeping, but could be awakened readily. Eats and drinks.
				March 27.
				This dog is alive and well.

TABLE 4.

Experiment 15. March 4, 1905. Dog. Weight, 15 k. Anesthetized with chloretone and morphin. Thorax opened. Artificial respiration.

Record showing amplitude of heart contractions taken from the right ventricle by means of Roy & Adami's myocardiograph. Pulse rate and blood pressure record taken from carotid artery by the usual manometer kymograph at the same time as the myocardiogram was made. This experiment was designed to show the action of large intravenous injections of the sodium salt of diethyloxyacetyl urea on the heart and blood pressure. For details read horizontally across the table from these numerals.

No.	Time.	Pulse Rate.	Heart Amp.	Height in mm. before Injection.	Height after Injection.	Remarks.
0	9:55 a. m.	150	38	38	38	Normal.
1	9:56 "	134	20	38	24	10 c.c. of 25 per ct. sodium salt of diethyloxyacetyl urea + 15 c.c. saline injected into femoral vein.
2	9:59 "	126	14	35	22	15 c.c. of 25 per ct. sodium salt + 10 c.c. saline.
3	10:30 "	. . .	. .	. .	. .	Changed drum.
4	10:50 "	124	5	35	13	20 c.c. of 25 per ct. sodium + 5 c.c. saline.
5	11:15 "					
6	11:39 "	130	10	34	14	20 c.c. of 25 per ct. sodium + 5 c.c. saline.
7	11:44 "	. . .	. .	. .	. .	Changed drum.
8	11:47 "	122	10	33	5	25 c.c. sodium.
9	11:48 "	. . .	. .	29	. .	
10	11:56 "	. . .	. .	29	. .	Stopped drum.

organs were active. In some instances, after very large doses, the animals showed some tendency to dizziness, but this was much less pronounced than is often noticed with drugs of this class. Very large doses produced complete anesthesia, and, if repeated from day to day, the animals would ultimately die of exhaustion, but if the drug was discontinued within a reasonable length of time, even though the animal was completely anesthetized, recovery was complete.

Dogs.—A large number of experiments were made on dogs anesthetized with chloretone and morphin, a method that I have used for several years for rendering animals unconscious when employed for making blood pressure and other experiments.

Blood-pressure tracings were made from the carotid artery by means of a mercury manometer, and the myocardiograph records were taken from the right ventricle by means of Roy and Adami's myocardiograph, the animals being supplied with artificial respiration. Experiment 15 shows the results obtained in one typical experiment.

SUMMARY AND CONCLUSIONS.

1. Diethyloxyacetyl urea is a clear, transparent, slightly soluble, oily liquid, sp. gr. 1.1117, with characteristic etherial odor and taste. Chemical formula $C_{13}H_{24}N_2O_5$.

2. The sodium salt forms flaky, very soluble crystals, having a mild etherial taste. Chemical formula $C_{13}H_{23}N_2NaO_5$.

3. Consideration of its chemical structure warrants the belief that the depressing ethyl group, 40 per cent., and stimulating nitrogen, 9.6 per cent., are in the right proportion to produce a safe and efficient hypnotic.

4. Experiments on warm and cold-blooded animals show that diethyloxyacetyl urea is a relatively non-toxic chemical compound.

5. Prompt hypnotic action is produced in warm and cold-blooded animals when the drug is exhibited in any one of the usual methods of administration.

6. Complete anesthesia is produced by large doses, from which recovery is complete.

7. Pulse rate, blood pressure, heart action and respiration are but slightly, if at all, influenced by reasonably sized doses.

8. While the laboratory results indicate that diethyloxyacetyl urea will be of practical value, it remains to be demonstrated by clinical experiments whether it will prove to be a desirable hypnotic for human beings.

INVERSION OF THE UTERUS,

WITH REPORT OF TWO CASES REPLACED BY LAPAROTOMY.*

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Inversion of the uterus is that form of displacement in which the uterus is turned inside out. For some hundreds of years[1] it has been the custom to describe two forms—partial and incomplete. In the partial form the fundus, though indented, does not pass through the os externum; in the complete form the fundus has been expressed through the os, so that the entire uterine cavity is obliterated. As both the method of diagnosis and the treatment vary with the degree of inversion, I would suggest that the first be called "initial," the term "partial" being reserved for those cases in which, although the fundus has passed through the os externum into the vagina, the inversion has not proceeded far enough to obliterate the uterine cavity. This is in accord with the German terminology.[2]

From a study of reported cases and from my own experience in the two cases here reported, I am led to believe that this is by far the most common form, and I shall discuss it more fully in considering diagnosis.

ETIOLOGY.

Any consideration of etiology must be preceded by a word as to the pathologic findings. Authoritative pathologic examinations are necessarily rare, since in recent years it has usually been possible to replace the uterus instead of removing it. Peterson[3] examined the tissues cut from the sides of his anterior incision; these showed an increase of connective tissue in the muscularis with sclerotic changes in the blood vessels. In the meshes of the fibrin deposit on the mucosa were found cell-débris and leucocytes. It has been generally assumed as an hypothesis that inversion occurs only where there has been paralysis of the uterine musculature at some point, which, being inactive, is forced in by the contractions of the surrounding muscular tissue.[4] Such paralysis is most apt to occur at the placental site, and we have consequently a large proportion of puerperal cases.

The statistics of Crosse,[5] based on 400 collected cases, are accepted to-day, and show about 88 per cent. puerperal; 12 per cent. due to fibroids and isolated instances of other causes. Given the pathologic paralysis, almost any muscular exertion, such as coughing or sneezing, may prove an exciting cause. The commonly accepted causes are: Traction on the adherent placenta, precipitate delivery, short umbilical cord, traction by tumors. The remarkable cases attested by Baudelocque, Parker and others of inversion of the virgin uterus in the absence of tumor, are probably to be explained as following an unrecognized dilatation by hematometra. In the great majority of cases the inversion begins either centrally in the fundus, or in one cornu, but another form has been established which is due to a progressive eversion which begins at the cervix. The condition is probably much more frequent than is indicated by the oft-published statistics of Denham,[6] who found but one acute inversion in 100,000 births in Dublin, and C. v. Braun, who did not meet with an instance in 250,000 births in Vienna.

Inversions are considered as acute or chronic. It is impossible to set a definite time limit for the acute stage, but it is probably less than twenty-four hours, and the change in the uterine tissues which constitutes the essential feature of the chronic condition may take place within a few hours of the inversion.

Acute inversion is usually accompanied by sharp pain, shock, hemorrhage and collapse. Yet any one or all of these symptoms may be missing. This is particularly true of pain, as inversion is apt to occur while the patient is still unconscious from the anesthetic given at the close of normal labor or for operative procedures.

* I wish to acknowledge my deep obligation to Drs. Charles M. Green and Franklin S. Newell, my seniors on the gynecologic staff at the Boston City Hospital, for the opportunity of operating on the cases here reported and particularly for their skilled assistance (from the vaginal side), without which my procedure would have been futile.

1. Soranus of Ephesus (A. D. 110) states that "inversio uteri" may follow the careless removal of adherent placenta. Ermerins. Sorani Ephesii, Liber de Muliebribus Affectionibus, 1869, Ch. xxii.

2. Cf. F. v. Winckel: Lehrbuch der Geburtshulfe, Leipzig, 1893, p. 703.

3. R. Peterson: Am. Gynecology, New York, 1903, vol. ii, p. 489.

4. Schauta: Wien, klin. Woch., 1903, vol. xvi, p. 812.

5. Crosse: Tr. Prov. M. & S. Ass., London, 1847, xv., 243.

6. Denham: Dublin, Q. J. Med. Sc., 1866, vol. xlii, p. 181.

Chronic inversion also may have few or no symptoms, or there may be occasional hemorrhage with consequent anemia, disorders of urinary apparatus, difficult defecation or constipation and discomfort in walking or standing. Complications may occur in acute inversion, but are more often met with in old chronic cases. Thus in an acute case the inversion may be the result of the expression of a large sessile intra-uterine tumor, in which case it is difficult to establish the upper limit of the tumor, or the beginning of the uterine tissue.[7] The complicating tumor may be a subperitoneal myoma, which is mistaken for the fundus in normal situation.[8]

In chronic cases, adhesions may form between the extruded endometrium and the cervix or vagina. There may be adhesions between the peritoneal coats abnormally in contact in the peritoneal crater or between the round ligaments, Fallopian tubes and the peritoneal lining of this crater. The contraction of the cervical ring may be sufficiently tight to cut off the circulation and cause gangrene of the uterus, and of the round ligaments and Fallopian tubes in so far as they lie below the cervix in the crater. Finally, where the blood supply is merely diminished we may have atrophy of the inverted fundus, the endometrium of which has been converted into a tissue resembling skin through its constant friction with the vaginal walls or between the thighs.

In spite of the fact that immediate reposition is usually easy and safe, the prognosis in acute inversion probably will remain always a grave one. Death may occur in a comparatively short interval as a result of extreme shock, or of sudden overwhelming hemorrhage. In the remarkable case reported by Anderodias,[9] he saw the patient less than two hours after the inversion occurred, and though reposition by taxis was comparatively easy, the patient collapsed and died instantly after the maneuvre. Crosse gives a mortality of 73 per cent. in 109 cases; Winckel's more modern statistics show a mortality of 22 per cent. in 54 cases.

Considering unrecognized instances, the mortality is probably higher than the last-named percentage. If the patient lives through the acute stage, her life is endangered by the possibility of acute infection of the endometrium, and later by periodic and irregular hemorrhage and by the grave operative risks incurred in seeking relief for the condition. A certain number of spontaneous repositions are recorded. Thomas,[10] in a classical article on the subject, quotes twelve such cases, and the following anecdote: "There is nothing easier than the rejection of the testimony of others, and the discrediting of deductions which we ourselves have not drawn. When De La Barre presented his case of spontaneous reposition to the Academy of Surgery, Baudelocque was appointed a committee to examine into it and reported that it was 'totally false.' Some years afterwards he met with a very similar case, and yielded to the evidence of his own senses a credence which he had presumptuously denied to the assertions of another."

DIAGNOSIS.

The diagnosis of inversion is usually difficult. Apart from numerous instances where the mass has been excised or morcellated as a polyp without considering the possibility of inversion, many eminent surgeons have erred after the most careful attempts at diagnosis, and in no condition is an error in diagnosis fraught with more danger to the patient. The possibility of inversion of the uterus must be considered whenever a uterine, cervical or vaginal tumor is detected by the physician. Even where the microscopic examination of snippings reveals a fibroma or sarcoma, the possibility of a complicating inversion must be borne in mind.

Velpeau[11] said in regard to this diagnosis: "In some cases doubt is the only rational opinion." Gooch,[12] in his essay, writes: "When partially inverted, the tumor in the smoothness of its surface, the roundness of its body, the narrowness of its neck, and its being encircled by the orifice of the uterus, sometimes exactly resembles polypus of the fundus."

The differential diagnosis lies between inversion, uterine tumor (polyp, fibroid or sarcoma) and procidentia. The last named should be ruled out by a careful examination, but a tumor may deceive in various ways. The orifices of the tubes are by no means always obvious. Where the fundus remains in the vagina they can not be detected, and even where the fundus is outside of the vulva these minute orifices, buried in the thickened endometrium, must be demonstrated with difficulty. The sound is not infallible, as a fibroid polyp may be adherent throughout the cervical circumference, and thus prevent the entrance of the sound. In partial inversion, even a fortnight after labor, the sub-involuted uterine cavity may admit the sound to the normal depth, though its fundus has passed through the os. During a protracted examination the uterus is apt to remain in a state of tonic contraction, when it is so hard as to simulate, not merely the body of a fibroid, but also its pedicle. The detection of contractions in the mass and its relaxation under full anesthesia may prove a valuable aid to diagnosis. The differentiation of the subjective sensations of the patient when the mass is touched is certainly of doubtful value. Through a very thin and much-relaxed abdominal wall under full anesthesia it may be possible to detect the depression or crater where the fundus should be (this was true in one of my cases, but not in the other), but where the ring is tightly contracted, filled with both round ligaments and both Fallopian tubes, and capped by the ovaries, there is no depression to be felt. When not in a state of contraction, the inverted uterus, if grasped and held by the examining hand, becomes distinctly diminished in size, and considerable bloody serum is expressed from the very edematous endometrium. In neither of my cases was there sufficient bleeding, as a result of examination and taxis, to be worthy of note.

As inversion may occur after labor without pain, hemorrhage, or pronounced shock, the favorable minutes for replacing may have elapsed before either patient or attendant is aware of the serious complication. Consequently, the obstetrician must always assure himself immediately after the delivery of the placenta that the spheroid of the fundus is convex, and this, fortunately, it is usually easy to do, because of the marked relaxation of the abdominal walls. Where the patient has complained of sharp pain during a forcible expression of the placenta, or where this event is followed by hemorrhage, if the uterus can not be outlined by abdominal palpation, a careful vaginal examination is indicated. It hardly seems necessary to reiterate the prophylactic proverb "do not pull on the cord." Further prophylactic

7. See illustration. Kelly: Operative Gynecology, New York, 1900, i, 536.
8. See illustration. Dudley: Principles of Gynecology, Philadelphia, 1904, p. 705.
9. Anderodias: Bull. Soc. d'Obst., Paris, 1903, vol. vi, p. 97.
10. Diseases of Women, Philadelphia, 1875, p. 431.
11. Clin. Chirurg., Paris, 1841, vol. ii.
12. Gooch: Essay on "The Symptoms, etc., of Inversio Uteri," London, 1818.

measures are the avoidance of undue force in Credé's method, and the complete abstention from pressure on the fundus while it is relaxed. However, the possibility of spontaneous inversion some hours after the delivery of the placenta has been well established.

METHODS OF TREATMENT.

Peterson[3] gives a perfect summary of the methods of treatment,[13] and I shall detail in regard to treatment only sufficient to make clear my contention for the abdominal route.

In acute inversion, an immediate attempt to replace should be made, if the patient's condition permits. But if there be extreme shock, provided the hemorrhage can be controlled, it is advisable to defer all manipulation. The method of replacing by taxis is simple, but difficult to execute. The theory that the placenta, if still attached to the fundus, should be left as found until after reposition to avoid further hemorrhage, has many objections. Inversion is most apt to occur where the placenta is adherent, and such a placenta can be separated much easier before than after reposition. Further, the placenta increases the bulk of the mass, which is to be returned through the constricted os. After years of discussion there is to-day practical unanimity that the part of the uterus last inverted should be returned first. The patient should be given full anesthesia. The bladder and the rectum having been emptied, one hand passed into the vagina grasps the inverted fundus and compresses it so as to express serum and reduce its bulk. The fingers of the vaginal hand attempt alternately to dilate the cervical ring and to push through it that part of the uterus which lies just below the ring in the vagina. Meanwhile with the other hand, counterpressure is made through the abdominal wall, and where the wall is thin and thoroughly relaxed the fingers may enter the ring from above and aid in its dilatation. In view of the additional shock entailed by prolonged and forcible taxis, and the success of operative procedures, both the force and duration of taxis should be limited sharply. Rupture of the vagina and injury to adjacent organs is not a rare sequel of forcible taxis. When reposition has been effected, the uterus should be washed out with hot saline solution, and if it does not contract firmly, it is to be packed.

In chronic inversion, taxis should always be given a trial, particularly as it will usually demonstrate whether it seems advisable to attempt to replace the uterus intact by the abdominal method, or whether vaginal section of both cervix and uterus are indicated, because of the firmness of the ring and the solidity of the fundus. If taxis fail, the numerous older methods may well be passed by and either the vaginal or abdominal section may be chosen. These older methods were not without grave risks. They attempted reposition by taxis with the whole hand in the rectum or with the fingers in the bladder, by the use of prolonged pressure by means of air or water-bags or spiral springs. Where the conservative operative measures fail, recourse to hysterectomy or amputation is indicated.

Peterson divides the vaginal operations into four classes according to whether the incision is partial, from cervix to fundus, or complete, through the cervix to the fundus, and according to whether the incision is made in the anterior or posterior wall of the uterus.

The ideal vaginal method (known as Spinelli's operation), was used by Peterson. It is the complete anterior colpo-hysterotomy. The vesico-uterine peritoneal pouch is opened, the cervix is stretched from side to side, and an incision is then made through the cervix and uterus to within one-third inch of the fundus. The uterus is then easily reinverted, and the incision closed as in Cesarean section.

There are certain objections to the vaginal route. The tubes and round ligaments are exposed to vaginal contamination and then immediately turned free into the abdomen. As both tubes, round ligaments and sometimes a loop of bowel are packed tightly into the crater, there is the risk of injury to these organs in making the incision. If the vaginal incision is made posteriorly, there is apt to result an adherent retroversion; if made anteriorly, we have the undesirable vaginal fixation. Finally, there is the possibility of a rupture of the uterine scar in a subsequent pregnancy.

THE ABDOMINAL ROUTE.

In 1869, T. G. Thomas published an account of a case successfully treated by abdominal section and intra-abdominal dilatation of the cervical ring. This case was a chronic inversion of two years' duration. Subsequently he reported a second case of eight months' duration, in which reposition was equally successful, but the patient died of peritonitis some days later. Peterson collected fifteen cases of inversion treated by the abdominal route. Of these, eight were successful and seven complete failures. (It does not seem just to consider Thomas' second case a failure, although it resulted fatally.) Of the eight successes, three promised failure until the ring was incised. I have not been able to find any record of a similar operation since the publication of Peterson's paper. Counting Thomas' second case as a mechanical success, and adding my two cases, we have a successful percentage of 73 per cent. This compares poorly with the record of Spinelli's operation, performed six times with six successes. However, if due allowance is made for the small numbers on which these statistics are based, and for the constant recent improvement in abdominal surgery, I believe that the abdominal operation will be developed so that its record will be superior to the vaginal. I certainly do not advise the abdominal operation in all cases of inversion. In this, as in all other surgical diseases, the operation must be chosen after due consideration of the individual case.

Details of Operation.—The bladder and rectum are emptied. The vagina and uterus are thoroughly cleansed by prolonged washing with warm saline solution. After the usual preparation of the abdomen, it is opened by a median incision, the patient being in the high Trendelenberg position, and so draped with the sterile sheets as to permit access to the vagina. Immediately the bowels are pushed upward and "walled off" by a plentiful supply of gauze. If properly done this decreases greatly the shock and danger of the operation, as it limits sharply the extent of peritoneal exposure and trauma. If possible, the ring is dilated with the fingers, but if the constriction is so tight as to prevent this procedure, the ring is dilated first with a steel dilator of the Wathen or Goodell type, then with Reynold's dilator, which is peculiarly serviceable. In inserting the steel dilator and in dilating, care must be taken to avoid pressure on the tubes and round ligaments. Only moderate force should be used, and this must be regulated by the hand and not by any mechanical device on the dilator. In a few minutes it will be possible to partly withdraw the round ligaments and tubes, though no force is to be

13. Excellent bibliographies are given in the articles of Peterson and v. Winckel, already referred to.

employed in order to accomplish this, and no attempt should be made to reinvert the uterus by traction on the ligaments or tubes. An assistant places the hand in the vagina and begins to carry up that part of the uterus which descended last; as this rises it is caught and held with volsellum forceps. Thereon the process of dilatation, reinverting and holding are repeated until the operation is complete. No attempt at traction on the volsellum forceps is permissible, as it will result merely in lacerating the peritoneal covering of the uterus itself. Progress at first is very slow, but after a certain point is reached the fundus slides through the ring into position. Meanwhile the abdominal assistant has offered counterpressure against the ring. When the uterus has been replaced, it may be suspended, but as involution proceeds rapidly during the hours following reposition, it is better merely to support the fundus for a few minutes, during which the uterus will begin to contract and retract, and the tubes, if not too long or too severely constricted, will regain practically their normal appearance. The gauze is removed and the abdomen closed in tiers. The table is then lowered, the foot-piece dropped, and two nurses hold the patient's legs in the lithotomy position, while a hot intrauterine douche is given by the vaginal assistant who has not withdrawn his hand until the operator has felt assured that the uterus would remain in place. The operation does not require more than forty-five minutes from beginning to end. As the work of the vaginal assistant requires more skill and is more important than the abdominal maneuvres, the assistant should be chosen accordingly.

If this operation can be perfected so as to insure invariable mechanical success, there can be no doubt that it will be an ideal procedure for reposition of the inverted uterus, which is thus restored intact to its original position without violating the integrity of its peritoneal cover. Further, it permits an inspection of the tubes, which in an old case may require resection.

The two cases here reported were treated within thirteen months on the Gynecologic Service of the Boston City Hospital.

CASE 1.—Mrs. E. R., aged 29. American by birth; i-para. Family and past history negative. Five days before I saw her patient had given birth to a living baby after a rather long and difficult labor. The placenta was expelled naturally without unusual pain or other symptoms. Two hours later she had a moderate hemorrhage which was repeated at intervals until vaginal examination disclosed a tumor, when she was sent to the hospital. At entrance temperature 101.5, pulse 114. Pulse regular, good volume and tension. Abdomen normally tympanitic and not tender. What appeared to be a fibroid the size of a large pear protruded from the vulva and on vaginal examination was found to pass through the cervix. Leucocytosis of 17,800.

The patient was kept under observation for a few days until the sloughing perineum could be rendered clean. Then under ether, a final examination was made, which revealed the error in diagnosis. The sound halted when an attempt was made to enter the os at the side of the mass, and careful abdominal palpation revealed the crater. Attempts to reduce the inversion by taxis failed and after forty-five minutes of careful manipulation the patient was put to bed and prepared for laparotomy on the following day.

Operation.—Patient in high Trendelenberg position. The sterile sheets draped over each thigh separately so as to permit access to the vagina. The abdomen having been opened by a median incision, the bowel was carefully packed towards the diaphragm with gauze strips. The uterus presented the striking picture of complete inversion. Both tubes and both round ligaments were within the inverted cavity, the tubes were deeply injected, purple, and thrice the normal size. The ovaries also wine-colored and tense, rested on the brim of the cavity. The ring was firm and could not be dilated with the fingers. The ring was then carefully dilated with Reynolds' dilators, which were inserted so as to avoid injury to the tubes. The assistant's hand in the vagina then began the process of reposition. The anterior wall was raised, and as it came up it was caught and held with volsellum forceps. As each centimeter was gained, another pair of forceps was applied. The traction from above was reduced to a minimum. As soon as possible the tubes were delivered. This gave more room, and after repeating the dilatation with the Reynolds dilators, the fundus slipped through the ring. The congestion of tubes and ovaries quickly disappeared. The uterus contracted and showed no tendency to invert. However, as the fundus tended to sink back into the fossa of Douglas, it was lightly suspended. When the volsellum forceps were first applied, some traction was made which caused them to tear out and leave a small nick in the peritoneal coat of the uterus. This was readily closed with one stitch of fine catgut.

The operation consumed less than half an hour. It was attended by very moderate shock. At the close of the operation a copious hot intrauterine irrigation of salt solution was given. Six hours after operation the pulse was 104, temperature 101.4. The subsequent convalescence was uneventful.

CASE 2.—Mrs. M. H., aged 37. Irish by birth; iii-para. Patient had an instrumental delivery at her first labor in 1901. Her second labor (1903) had been normal. Her third labor was terminated after twenty-one hours by a high forceps operation. Shortly after delivery the placenta was expelled, without aid, and was found still attached to the fundus, which had come down with it. There was little pain, only slight shock, and no hemorrhage. Attempts to replace by taxis having failed, the patient was sent to the hospital, where I saw her twelve hours after delivery.

Patient did not look anemic, but was pallid. The expression was anxious, the facies typical of shock. The pulse was small and rapid (130), the temperature 100. The abdomen was normally tympanitic, not distended, not tender. Protruding from the dilated os was a round, hard mass, the size of a fist. The examining fingers passed completely around this mass, which appeared to be attached by a thick twisted pedicle which passed through a tightly constricted internal os. Although no depression of the fundus could be felt, a provisional diagnosis of inversion was made, and, under ether, a short attempt was made to replace by taxis. As this did not succeed, even in part, and as the mass remained hard, I decided that I was dealing with a fibroid. There was no hemorrhage, but the patient's condition was such that all further procedure was deferred until treatment for shock had been instituted.

This was at night. The following morning the patient was greatly improved; under ether a slight depression could be felt in the fundus, and the vaginal mass soft, so that the diagnosis was obvious. Taxis having again failed, the patient was prepared and the abdomen opened.

Operation.—Median incision. The conditions were similar to those described in Case 1. The ring was readily dilated with the fingers, so as to admit the half hand; but it contracted again as soon as the hand was withdrawn, so that it was necessary to dilate the ring again and again. Reposition was accomplished with only moderate difficulty in the same manner that was employed in Case 1. The entire operation was completed in forty minutes. It was followed by slight additional shock. Six hours after operation temperature 99, pulse 126. Convalescence uneventful.

Alcohol Is a Poor Cardiac Stimulant.—Dr. J. H. Kellogg of Battle Creek declares in the *Lancet-Clinic* that the theory that alcohol is a stimulant was long ago rendered thoroughly untenable by a multitude of carefully conducted experiments on healthy subjects, showing that alcohol is always and in all doses a narcotic, and not a stimulant; that it depresses, and does not excite the heart and other vital organs; that it lessens vital resistance to disease; and that it is a toxic agent which the body must cast out, and not a food to be assimilated or a source of energy or an aid to any vital organ or function.

THE ROENTGEN METHOD AS A GUIDE IN OPERATING FOR LITHIASIS OF THE URINARY TRACT.*

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It is one of the strangest phenomena in medicine that in the face of the most abundant proofs of reliability of renal skiagraphy, some of the best text-books still hesitate to recommend the method. Some others even openly warn the practitioner against it. This they do because authors have observed or heard of grave errors committed in its employment. Thus it is said, for instance, that skiagraphs taken by the "best experts" have shown renal calculi, while nephrotomy disclosed the absence of any concretion; and, on the other hand, that cases were reported, in which calculi were found at the operation after skiagraphy had failed to show evidence of their presence. None of these reports is well founded.

Whenever errors have been committed they were of the individual and not of the method, and this should not be held responsible. I have often admired the power of imagination of some novices in skiagraphic work, who demonstrated the outlines of calculi as well as of some abdominal organs to me, when I could only find the possible indications of a dense band of tissue or a spot in the plate or a button of the underclothing of a too modest patient.

Such visionary powers, while immensely useful in the art of Shakespeare or Goethe, can not be too strongly reprehended in the domain of science and in the field of the Roentgen rays.

Now, fortunately, skiagraphic technic is so much advanced to-day, that it stands in no need of the imagination. A definite diagnosis in suspected lithiasis can be made. In each and every instance, or in other words, a renal calculus must invariably show, provided calculus is there.

Lumbar exploration and similar procedures for suspected nephrolithiasis, advised in all text-books, are, therefore, no longer in order, the Roentgen method not only showing whether or not any calculi are present, but giving precise information as to their size, shape and number. It will also show whether there are any calculi in the ureter or bladder.

The revolution which the Roentgen method has wrought in this special field is as great as in that of the injuries and diseases of the bones, which, after years of struggling, thanks to the untiring efforts of a few imperturbable physicians, is gradually beginning to be appreciated by the profession at large.

The chemical composition of the calculi of the urinary tract determines the greater or lesser depth of their shadows. The greater their atomic weight, the greater their density, and consequently the more distinct the shadow. Thus, calculi composed of oxalate of lime show the most distinct shadows. Their shadows are even deeper than those of bone tissue. Next to them we find those consisting of phosphate of lime, while the uric-acid calculi give the faintest shadows.

In practice, however, we often find that calculi are not of one distinct type, and, if they are, layers of various degrees of density are observed. Two types are generally present, then one or the other character predominating. So it frequently happens that there is a nucleus of uric acid surrounded by alternate layers of the other elements.

This explains why, at least, some dense areas are found in all cases of renal calculus; the same is true when the calculi are of small size. The question of composition, however, is of less importance than that of bringing the calculous area as near to the plate as possible, and keeping the field absolutely quiet.

These two requirements are attained by the use of a tubular diaphragm, which offers another great advantage, that of permitting the passage of the focal rays alone, excluding those rays which emanate from the tubal wall.[1] The disadvantage of the tubular diaphragms is that only small areas can be shown at a time. This disadvantage is little felt in the representation of joints, etc., but in renal or biliary skiagraphy it may be responsible for missing the seat of the calculi.

It is evident, therefore, that in skiagraphy of the urinary tract a general exposure must precede that of a limited area, since it can not be known beforehand whether the suspected calculi were situated in one or in both kidneys, or in the ureters. In other words, the Roentgen plate must *a priori* include an area which is bounded by the eleventh rib and the crest of the ilium on one side and by the vertebræ and the anterior axillary line on the other. For this purpose, plates of the size 10x12 or 11x14 are required. Corresponding with each side of the body, wire letters are placed which serve as landmarks for comparison, and at the same time indicate the side of the body. This is emphasized for the reason that cases are reported in which it has happened that on account of the changed relations of the negative, the wrong side was incised.

A few more wire letters may be placed in the renal region, also serving as landmarks for the special exposure. It is useful sometimes to attach the same wire letters to the body by means of adhesive plaster strips and to skiagraph them together with the wire letters on the plate, thus being able to compare the relations of the landmarks of body and plate for better localization.

Now, while with the general tentative exposure, only faint outlines of the calculi are obtained as a rule, they may be distinct enough to show at what area the diaphragm should be adjusted best to attain the most distinct outlines.

If the large plate proves to be negative, although other means of examination point to the presence of nephrolithiasis (hematuria), both renal regions must be separately examined with the aid of the diaphragm, several exposures sometimes being required. This, of course, is troublesome, but in view of the great importance of a correct diagnosis, it can not be omitted. It happens rarely, however, that so many exposures are needed, as a rule, the two sufficing for information. In this manner I have also been able to show calcareous deposits which were produced by renal tuberculosis.

The *modus operandi* in renal skiagraphy is as follows: The general exposure is preceded by a thorough evacuation of the bowels, followed by the administration of a moderate dose of opium. The patient is in the dorsal position on a large plate covering both lumbar regions. For localization, a few wire letters are distributed over the plate, the R. (right side) and L. (left side) being placed directly underneath the outer surfaces of the

* This article was prepared to be read before the Section on Surgery and Anatomy of the American Medical Association at the Portland Session, July, 1905, but the author was prevented by sickness from being present.

1. Archives of the Röntgen Ray, etc., London, February, 1905.

lumbar regions, so that they appear on the integumental margins of the skiagraph. With a pair of calipers their distances from the spinal column and from the ribs are ascertained and transferred on the abdominal surface to be marked there for the proper adjustment of the diaphragm. The head and shoulder are elevated by a few pillows, while the chin touches the sternum. The knees, after being flexed, are well immobilized by sand bags. The exposure should last from five to eight minutes, in proportion to the thickness of the abdominal tissues to be penetrated. The vacuum of the tube should be soft. I prefer the self-regulating tube of Mueller for renal skiagraphy.

The criterion of a good plate is that the vertebræ, the eleventh and twelfth ribs and the outlines of the ileopsoas muscle can be clearly defined. On the other hand, a plate which shows a number of calculus-like shadows, but fails to represent these points, must be regarded absolutely misleading, and should never be used as a guide for operation. The only thing to do is to try a second and if necessary a third or fourth time, the latter, however, seldom being necessary in the hands of a man of little experience.

If the plate is good and shows the indications of calculi, the tubular diaphragm is applied now in the same position as advised for the general exposure, with the difference that the shoulder of the exposed side is elevated somewhat more. It is best pushed below the rib arch in an oblique direction in such a manner that its center corresponds with the landmarks indicated on the large plate. The oblique direction permits of pressing the diaphragm deeply into the abdomen, thus reducing the distance between it and the plate to a considerable extent.

The time of diaphragmatic exposure should be two minutes in thin and from four to five minutes in stout individuals.

If the large plate is negative, I resort to a diaphragmatic exposure nevertheless, and if this shows the criteria mentioned above distinctly, I can most positively assure my patient that he does not suffer from nephrolithiasis.

It is not desirable, however, that the bones mentioned should show textural details. As a rule, the longer the exposure lasts, the clearer the bones show and the less marked the calculi will appear.

From this we also learn that rules for the time of exposure can only be laid down in general, the instinct of the operator being an important factor in determining details.

These views apply much more to the technic of biliary skiagraphy. As I have so often emphasized, the reason why so many surgeons have tried in vain to reproduce the calculi is due to the simple fact that they use hard tubes which penetrate them, so that they on account of their small degree of density are irradiated away, so to speak. In all my successful exposures for biliary calculi the bones appear dark and especially show no textural details.

The same principles apply to the skiagraphy of the urinary bladder. Vesical calculi, however, can be well shown without the aid of the diaphragm. In stout individuals the diaphragm may be useful sometimes.

The patient is skiagraphed in the recumbent position, the center of the tube to be directed to the upper margin of the symphysis. A good vesical skiagraph shows the structures of the coccyx well. The sacrum should not show any details. By oblique irradiation, the shadows of the vesical calculi are generally found just below those of the coccyx. An oblique exposure should be made beside, because it may show whether the stone is free or encysted. If the patient bends slightly forward in the lateral position, the calculus, if free, sinks toward the anterior vesical wall and becomes conspicuous directly behind the anterior abdominal wall. If it is not free, it usually shows far back toward the sacrum, since encysted calculi are nearly always attached to the posterior vesical wall. If the stone is of very large size, or if a great number are present, the whole vesical space is filled up and displacement is not apt to occur.

So far as the diagnosis of the number, shape and position of the calculi is concerned, the Roentgen method affords more valuable means than the cystoscope, aside from the fact that a calculus imbedded in a diverticulum will escape the cystoscope, while the rays will always detect it. At the same time, it should be realized that skiagraphy is a far more comfortable procedure than cystoscopy. The time of exposure is two minutes in children and from three to four minutes in adults. A soft vacuum is just as desirable as in renal skiagraphy.

My experience with the Roentgen method has suggested to me that it is invariably necessary to skiagraph the renal regions whenever vesical calculus is suspected. Since I have made this a principle, I have found renal calculus whenever there was a concretion in the bladder. This is not strange, if we realize that most vesical calculi were originally formed in the kidneys. This also explains the frequent recurrence of vesical calculus after operation. Within the last year I have observed three cases in which I operated for recurrent vesical calculus. In all of them skiagraphy revealed the presence of nephrolithiasis.

The first case was that of a woman of 32, who submitted to lithotripsy a year before I saw her. She was greatly relieved at first, but nine months afterward began to suffer from frequent micturition and pain in the vesical region. Skiagraphy demonstrated the presence of a small calculus in the bladder and a larger one in the renal region. I removed the vesical calculus, but the patient felt so well afterward that so far she has not decided to be operated on for the nephrolithiasis. If the size of the renal calculi is such that they may pass the ureter, I do not regard the removal of renal calculi an imperative necessity, but advise antilithiatic medical treatment first, the effect of which is studied by the Roentgen method.

In another case, a man of 24 showed the same history. Suprapubic lithotomy two years before I saw him had brought complete relief, the symptoms of recurrence appearing a year afterward. Skiagraphy revealed a vesical calculus of moderate size and a triangular calculus of large size in the left kidney. The patient submitted to suprapubic lithotomy, and so far has not returned to me.

In the third case, that of a boy of 7, whose large vesical calculus was removed by suprapubic cystotomy three years ago, the relief was complete for about a year, when the patient again began to suffer from symptoms of vesical calculus. The parents at first were unwilling to permit of repeated surgical interference, and while hesitating, the patient became greatly emaciated, the symptoms of light urosepsis finally compelling the parents to give up their resistance. The skiagraph revealed the presence of vesical as well as renal calculi on the left side. Suprapubic cystotomy was performed at the Postgraduate Hospital, and gave immediate relief from

painful micturition, but had little influence on the pyelitic symptoms. The extreme exhaustion of the patient seemed to me to be a contraindication to immediate nephrotomy, wherefore I tried to keep the patient up with stimulation, at the same time giving hexamethylenamine internally. Three weeks afterward, when the vesical wound was thoroughly healed, I resorted to nephrotomy. The large triangular calculus was tightly imbedded in the parenchyma, so that it had to be mostly shelled out with the knife. The patient was discharged from the hospital four weeks afterward.

A small calculus was found near the lower surface of the large renal concretion. It would most probably have formed the nucleus for a third calculous formation in the bladder if it had been removed. The calculi consisted of oxalate of lime and the outer layer showed a smaller degree of density than the inner.

In another case of great skiagraphic interest, the patient was operated on at the Postgraduate Hospital. The patient, a woman of 36, began to suffer from violent pain in the right lumbar region thirteen years ago. Examination of the urine revealed the presence of pus. Nephrotomy disclosed the presence of a calculus of moderate size surrounded by pus. It was supposed, then, that the calculus was the source of the suppuration, and consequently a speedy recovery was expected. This expectation was not realized, a fistula remaining. The patient improved considerably, but the fistula did not close, so that after a year had elapsed, nephrectomy was advised, to which the patient, however, did not submit because her general condition had become very good in the meanwhile and the discharge had decreased.

About a year later the fistulous tract closed, more pus appeared in the urine and the left side became painful. Left-sided nephrotomy was done, a large abscess being evacuated. The patient again improved and the opening closed, but the pyuria continued, the patient's condition varying considerably.

When I saw her for the first time I suggested skiagraphic examination beside the other modern diagnostic means (cryoscopy, ureteroscopy), but the patient said: "There is no necessity for examining for nephrolithiasis, because the stone I had was removed by the surgeon." I mention this as an interesting and misleading argument. I, of course, insisted on my proposition, and the skiagraph showed the faint outlines of four calculi in the right lumbar region. A second exposure with the diaphragm showed them very distinctly.

The calculi had to be shelled out with difficulty, the irregular surface forming an impediment. The perirenal structures were matted and hardened, a natural consequence of the long-standing suppuration and inflammation. The adhesions were so dense that the kidney could not be lifted out, and great care had to be exercised during the whole procedure. This observation is another point against the formation of normal blood circulation after decapsulation. One stone had a sharp triangular edge. Recovery took place in two weeks, the patient being able to go around at that time. Three weeks after the operation febrile elevations began and the left side became painful. An abscess formed which was promptly discharged. Exploration of the abscess cavity revealed the presence of a long sinus leading to the opposite side just in front of the spinal column. The patient improved slowly and is up at the present writing, the thorough closing of the wound being expected in a short time.

The epicrisis of this case suggests that nephrolithiasis existed at the time of the first operation, when the Roentgen method was unfortunately not yet available. The very able surgeon who operated at that time undoubtedly examined the kidney carefully, but was unable to palpate the calculi through the parenchyma. The advice given later, when the fistula did not close, suggests that he thought the kidney to be in a state of destruction rather than assumed the presence of the stone, which under the circumstances would have been most natural. Under the most careful wound treatment and the good care which the intelligent patient exercised, the fistula closed, but the pus became retained in the depth and probably found a way to the opposite side which necessitated the incision on the left side. It is evident that if the Roentgen method had been available at the time of the first operation, the remaining calculi which penetrated the whole kidney would have been recognized and removed at once, thus sparing years of suffering. It did not only reveal their number, but also their size and shape, and—last but not least—localized them. After the surgeon has removed the calculi, which are easily identified with those of the plate, no further searching is required, as it was imperative in former years, when the kidney had to be nearly dissected in order to ascertain whether there were any additional calculi left.

INFLAMMATION OF THE EYE DUE TO THE TOXINS OF THE GONOCOCCUS.

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IRITIS.

Under the name of metastatic ophthalmia, or some other such synonym, inflammation of the iris has long been recognized among ophthalmologists as a possible accompaniment of gonorrheal urethral infection. There is scarcely a treatise on diseases of the eye since McKenzie's time, but speaks of it in a more or less extended manner.

The iritis is commonly regarded by ophthalmic authorities, as a part of an intoxication which manifests itself under the form of rheumatism; at least, few cases have been reported which have not been associated with greater or less pronounced symptoms of a rheumatic nature—usually affecting the joints.

Whether the intoxication in these instances is from an entrance into the circulation of the gonococcus itself or from the product known as the toxins, has not been definitely settled to the satisfaction of all. Further investigation and observation along this line are needed. The fact of the association of the diseases with gonorrheal infection, however, is no longer disputed.

As to the frequency of gonorrheal iritis, all authorities are not agreed. By some it is considered as extremely rare. De Lapersonne[1] of Paris, for instance, who is one of the latest writing on the subject, states that he sees only one or two cases in every 7,000 new patients at the Hotel Dieu. Some others, however, seem to regard it as rather common. This discrepancy may be accounted for by the fact that the complication is more frequent in some localities than in others, or, what is more probable, by a failure on the part of some clinicians to inquire into the existence of gonorrhea in the cases of iritis which come under observation. It

1. Archiv. D'Ophth., March, 1905.

is a fact not without bearing on the point of frequency, that from the large clinic for genitourinary disease at the Central Dispensary and Emergency Hospital, where my own clinic is located, there has not been a single case of gonorrheal iritis referred to my service during the last twenty-five years, while cases of iritis from syphilis have come to me from that clinic in large numbers. It may be of interest to know that the genitourinary clinic is largely recruited from the negroes, among whom gonorrhea is most rife.

The forms under which gonorrheal iritis may appear are various. It may be the so-called spongy iritis with a deep anterior chamber and dilated pupil, or any of the plastic varieties with various kinds of exudate, and even the hemorrhagic form has been mentioned. The so-called spongy iritis, such as was present in the case to be described, while one of the rarest forms of iritis to be met, generally finds its place here, I think, with greater comparative frequency than the other forms. As another distinctive feature of gonorrheal iritis may be mentioned its tendency to recurrence during the same or subsequent attacks of gonorrhea. The same holds true of the common rheumatic form. The disease may be very intense in its manifestation or mild and slow in its progress. Almost without exception, both rheumatism and iritis show themselves during the declining stage of the urethral disease, quite contrary to what would be expected. One or both eyes may be affected at the same time or in succession.

It seems singular and altogether quite unaccountable that while gonorrheal iritis finds at least a mention in practically every text-book of importance on diseases of the eye, it seems to be completely ignored in all the treatises on genitourinary diseases which I have been able to consult, with the exception of two American text-books.[1]

It is, therefore, not without justification that the subject is brought more closely to the attention of the general practitioner and genitourinary surgeons among whose patients the disease shows itself primarily, and in whom a correct diagnosis should first be made, and, of even more importance, a proper treatment promptly begun. A careless or not sufficiently informed practitioner, not being aware of the possibility of iritis as a complication of gonorrhea would naturally look on any redness or infection of an eye as a beginning conjunctivitis due to an external infection, and treat it as such with astringents and antiseptics, probably for some days, so that by the time the real condition becomes known irreparable damage would already have been done. As is well known, it is more than usually necessary that in iritis the use of a mydriatic be begun early in order to secure at once as full a dilatation of the pupil as possible—since, otherwise, permanent adhesion to the anterior capsule of the lens or complete closure of the pupil is almost certain to occur. A day or two, or even a few hours' delay, may mark the line between the preservation of good vision and partial or even complete blindness. As a clinical contribution to the study of this form of disease the following history is offered:

Patient.—J. A. D., a young white man aged 22, came to me on Oct. 6, 1904, complaining of his eyes, which he said felt uncomfortable but not painful, and as he had been suffering from gonorrhea for some three weeks, he was fearful that this might be the beginning of a gonorrheal conjunctivitis, as he was aware that "gonorrhea often affected the eyes."

Examination and Treatment.—As the conjunctiva was clear and the pupils responded promptly to light, I assured him that there was no inflammatory trouble, but, as an examination revealed myopic astigmia of 0.5 D. with the rule, he was ordered correcting glasses, which gave V = 5/5 in both eyes.

Subsequent History.—On October 7 there was some slight injection of the right eyeball, the vessels being fine and coming up to the corneal edge; no mucus or pus. There was no pain and the pupil reacted well to light. He was ordered to make hot applications to this eye and to abstain from work. This condition continued about the same with clear media and a normal fundus until October 12, when the bulbar congestion increased, but with no complaint of pain. Atropin gr. ii to aqua 3i, was then ordered in addition to the hot applications.

October 13: When he awoke he found that his vision was almost entirely gone. An examination revealed great muddiness of the anterior chamber and a rigid but fair-sized pupil. The fundus could not be made out in any detail, only a dull diffuse redness being visible under the illumination. An examination with the binocular magnifier showed many fine fibers coming out from the pupillary space and reaching to the posterior surface of the cornea. The strength of the atropin was increased to gr. iv to aqua 3i, a drop in the eyelid three times a day, and dionin (ethyl-morphin hydrochlorate), 5 per cent., was used. The diagnosis of spongy iritis was made.

October 14: The mass in the anterior chamber had assumed its characteristic gelatinous appearance, filling the anterior chamber except for a small section above. The edge of the exudate, as is always the case in spongy iritis, was sharply marked and the mass could be seen to extend from the iris to the cornea, occupying the entire depth of the chamber. The size of the pupil remained about the same.

October 15: There was a still further diminution in the exudate, principally above, so that the pupil was somewhat uncovered.

October 16: All that remained of the exudate was a band about 2 mm. broad with sharp edges, occupying the center of the pupil from above downward. It had some fine offshoots connecting it with the pupillary edge above and below. The iris itself had a clean, unswollen look, the natural rugæ showing up plainly. The pupil was larger and vision was returning. There was still no acute pain complained of, only some slight frontal headache. The conjunctival injection, while pronounced, was not excessive and there was little or no chemosis.

October 17: The pupil was dilated *ad maximum* and the exudate was found to be all gone except a few spots on the anterior capsule of the lens. The fundus could be seen but rather dimly.

October 23: The lens was entirely clear and the fundus only slightly hazy, V = 5/20. In the course of ten days more every vestige of the disease had disappeared and vision was normal. Since then there has been no further trouble in either eye. The patient's gonorrhea has also disappeared.

Special inquiry was made as to the manifestations of rheumatism and it was found that some days before the appearance of the uncomfortable feeling in his eye

1. An examination was made of all the treatises on genitourinary diseases to be found in the library of the Surgeon-General's office with the following result:

Morrow: "System of Diseases of the Genitourinary Organs," New York, 1894.. No mention. Stokes, F. W.: "Diseases of the Genitourinary Organs," London, 1892. No mention. Taylor, R. W.: "A Treatise on Genitourinary and Venereal Diseases," New York and Philadelphia, 1904. No mention. Fuller, Eugene: "Diseases of the Genitourinary System," New York, 1892. Simply mentions it. Will-Ogilvie-Lectures on Genitourinary Diseases, London, 1894. No mention. Acton, W.: "The Diseases of the Genitourinary Organs." Philadelphia, 1888. No mention. Belfield, W. S.: "Diseases of the Genitourinary Organs," New York, 1884. No mention. "American Text-Book of Genitourinary Organs." Philadelphia. No mention. Black, D. C.: "Diseases of the Genitourinary Organs," Philadelphia, 1872. No mention. Guthrie, G. J.: "Genitourinary Diseases," London, 1836. No mention. Morris, H.: "Diseases of the Genitourinary Organs," London, 1895. No mention. Hyde and Montgomery: "Syphilis and Venereal Diseases," Philadelphia, 1900. Quite a full account of eye affections occurring in gonorrhea under the heading of gonorrheal rheumatism—not, however, placed in the index separately.

E. L. Keyes and E. L. Keyes, Jr. "Surgical Diseases of the Genito-urinary Organs," New York, 1903. A full account, similar to the above, of iritis and conjunctival affections in gonorrhea, considered under the heading of gonorrheal rheumatism. Not indexed separately.

he had a pain and some swelling in the joints of the big toe of the left foot. While not severe, these symptoms were present during the whole course of the eye affection.

CONJUNCTIVITIS.

The existence of conjunctivitis due to an endogenous infection of gonorrheal toxins is certainly rare, and is questioned in many quarters. Before the era of close bacteriologic study it is quite possible that cases of this kind may have escaped observation, since it would be only natural to refer any conjunctival inflammation with a mucopurulent or purulent discharge to an external infection. The case here reported might easily have been classed as an ordinary gonorrheal infection of the conjunctiva had I not followed my invariable custom of examining all conjunctival discharges as to their bacteriologic character.

Patient.—R. C., white, aged 25, came to me on May 22, 1905, with a double mucopurulent conjunctivitis.

Examination.—There was but slight swelling of the lids. The cornea was clear and the iris and other internal structures normal. He first noticed a discharge from his eyes two days ago. As he confessed to having a slight gonorrhea (a second attack), an external infection was considered almost certain. Nevertheless a smear of the discharge was taken. He was given a cleansing wash, to be used three times a day. An examination of the slide by Dr. Le Merle at the Lionel laboratory at the Emergency Hospital failed to reveal any organisms of any kind. The specimen was pure mucopus.

Course of the Disease.—May 24: There was quite considerable thickening of the conjunctiva of the lids. The eyeball itself was not entirely free from infection, and there were a few fine ecchymoses of the conjunctiva near the cornea in both eyes. The discharge was about the same—not creamy, but stringy and in rolls. On May 28 another careful examination of the discharge was made, with the same result as before—no organisms of any kind whatever were found. By May 30 the discharge was much less, and the infection of the ball quite gone.

Remarks.—By June 1 the eyes were practically free from discharge, though there yet remained some thickening of the conjunctiva of the lids, particularly the lower retrotarsal folds. An inquiry into his history revealed the fact that when he had his first attack of gonorrhea, two years ago, about three weeks after the beginning and when it was in the stage of decline, he was seized with rheumatism in the left foot which laid him up for three weeks. During his present attack he has had pain and tenderness of the patellar ligaments of the left knee—not severe, but sufficient to keep him reminded that he has a knee joint.

I am aware, of course, that it may be charged that there is little evidence, beyond that of coincidence, that the conjunctival inflammation was due to an endogenous affection. An external affection, however, I think, can be positively excluded, and we should at least learn from this the importance of a bacteriologic examination in every case of purulent conjunctivitis occurring in gonorrheic patients. If no gonococci are found, the prognosis is quite different from that when their presence is demonstrated.

External inflammations of the eye in gonorrheic infection have been observed and commented on by both ophthalmic and genitourinary authors. They have generally been described as of a mild type.

Taylor, who is one of the few who mention it at all, in his "Text-Book on Genitourinary Diseases," 1904, has characterized it as "serovascular conjunctivitis." Others evidently regard it as a form of scleroconjunctival affection. No author I have been able to consult has mentioned the pronounced mucopurulent form here described. While it is quite true that most of the complications of general gonorrheal infection show themselves under the form of the so-called rheumatic inflammation, that is a plastic form affecting the fibrous structures, there are certain instances in which it assumes the purulent form, as in cases of endocarditis that have been reported. A more careful examination and observation of cases of purulent conjunctivitis in gonorrheic subjects would throw much needed light on this subject, which has an important pathologic, as well as a highly practical interest.

THE MEDICAL FEATURES OF THE PAPYRUS EBERS.*

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This is an age of inquiry in researches and excavation, with a constant craving for some new development to assist us in our studies.

The last hundred years is the Niobe of civilization, not only in inventions and productions, but in the remarkable revelations which have materially assisted us in the wonderful development in science. However, whatever we have done to advance the history of civilization was not done by an easy task.

When we look through the magnificent works of discoverers and pioneers, the fruit of hardship, trial and labor, we can not fail to be infected with some of the enthusiasm which animated those who were endowed with superior intelligence and the gift of knowledge to bring forth hidden treasures from the inmost bosom of the earth, and to transmit them to future generations. Of one of these it may well be said: "From the Orient to the Occident," great be thy name (George Ebers).

The Anglo-Saxon nations, though renowned for deep thinking, and philosophizing in every branch of science and art, can not boast of a scholarship in bringing forth the first literature of the science of medicine. A third of a century has elapsed since George Ebers revealed the pages on medicine which were written some seven thousand years ago, and which were concealed for nearly four thousand years between the legs of a mummy. With the assistance of the learned Ludwig Stern and other Egyptologists, Ebers published the fact that Hippocrates of Cos, who for twenty-three hundred years has been known to the world as the "Father of Medicine," and as an original observer, no longer possesses this distinction. It has been wrested from the ancient Greek by the discovery of this papyrus of a date so remote as almost to place Hippocrates within the ranks of modern physicians.

However great the appreciation we may manifest, it is but strictest justice to do homage to the zeal, the remarkable ability and indefatigable activity of this German scholar, whose name is attached to that elaborate work, the "Papyrus Ebers."

The revelation of this important document merits assuredly all praise. In the Ebers Papyrus we have a monument of ancient culture before us, whose medical and historical value is inestimable, as may be seen from the description of its contents.

In this complication we have the most important medical treasure of the Egyptians before us, in a more complete form than any other known work. We learn much, too, of the anatomic, physiologic, pathologic and pathologico-anatomic conception of that time. Further-

* Delivered before the Thirtieth Annual Session of the American Academy of Medicine at Chicago, 1905.

more, it gives us information concerning the methods of the examination of a patient and diagnosis of the Egyptian physicians, of methods of teaching and learning, as well as of the medical standing at that time.

DISCOVERY OF THE PAPYRUS.

No better history can be attempted than the one given by the illustrious Ebers[1] himself, which possesses all the characteristics of a romance.

In the winter of 1872-73, George Ebers and his friend, Ludwig Stern, of the University of Leipsic spent several months at Thebes in quest of rare documents. For some time the two scientists made their dwelling place in one of the tombs of Abd-el-Gurnah, and associated daily with the Arabs of Luxor. A wealthy citizen of that place showed Ebers the antiquities which he, little by little, had obtained from a fellah, on the other side of the Nile. One day he exhibited one of those texts that are known under the name of "shai-en-sensen," and a wooden Osiris statuette in which a papyrus was well concealed. As an Arab did not trust himself to unfold the perishable manuscript, Ebers bore in mind the "shai-en-sensen," and let its high-priced possessor know that similar texts known had been found, and that he could not consider its purchase without seeing the contents of this papyrus, but that if he had anything really valuable or rare to offer him, he would not hesitate to pay him well for it. The next day the Arab sent for Ebers and took from a tin case a well-preserved papyrus roll. According to the statement of the Egyptian possessor, the papyrus was found in a tomb in the so-called Il Assiût part of the necropolis of Thebes, between the legs of a mummy. Since the finder of the latter was dead, it was impossible to refer to the exact tomb that formerly contained the treasure.

The costly manuscript was unfolded and on close inspection Ebers made the startling discovery that it was a document of great value and in an unusual condition of preservation. Ebers says he can with difficulty describe the impression that the precious, delightfully written and undamaged memorial made on him. The first lines on which his eyes fell belonged to a fragment of a calendar that he had known for a long time. This little document, so very important to the Egyptian chronology, was years ago shown to the renowned Egyptologists, Dümchen, Naville, Brugsch, Eisenlohr, and in 1870 to Ebers himself, in a copy belonging to a Mr. Smith, an American inhabitant of Luxor, who maintained that he was the possessor of an extensive medical papyrus. Because of an affection of the eyes contracted while copying inscriptions, Ebers could not study the Smith copies; hence Professor Eisenlohr of Heidelberg succeeded in obtaining a drawing (by means of tracing) of the fragment of calendar which was then regularly advertised in a periodical devoted to the Egyptian language and archæology, but without success.

Outside of the already-mentioned fragment of calendar, not a line of the papyrus was known. Mr. Smith claimed to have possessed a roll from which he had copied the fragment of the calendar, while, in reality, he possessed only a copy, which was the product of his own handwriting.

Thus Ebers knew the true possessor of the precious memorial, and he resolved from the first to obtain it. The required price was high, but not higher than that paid for less handsome papyri. The same winter an Englishman of the British Museum was traveling through Egypt, and being aware of the treasure at Thebes, intended to purchase the same from Mr. Smith, whom he believed the true possessor. Ebers longed to possess the document himself, but had not the means to meet the demands of the owner, who was not altogether aware of its full value. However, receiving the financial assistance, graciously advanced to him by Max Günther, privy councilor of commerce at Leipsic, then visiting the Egyptian monuments, Ebers purchased the treasured papyrus.

With the newly acquired treasure on board, they sailed for Cairo, where they had an opportunity to glance over the contents of the fragile roll. His friend, Professor Stern, remained behind. Ebers traveled homeward, and ended the work which he later showed and explained to His Majesty, the lamented King John of Saxony, a man of letters in the broadest sense of the term. It was finally turned over to the University of Leipsic for safe-keeping.

In order better to preserve the valuable antiquity, and so that it may be shown to the many visitors, it has been cut into twenty-nine pieces of different sizes. Each piece lies under a glass, so as to avoid pasting. Those written on both sides are placed between two glasses.

DESCRIPTION OF THE PAPYRUS.

When Ebers came into possession of the papyrus, it consisted of a single, tightly rolled piece of the finest yellow-brown papyrus. The width of the document was 30 centimeters, and the length of the written part 20.23 meters. No other papyrus known to Egyptologists is better preserved.

The text of this perfect ancient record is divided into columns, each of which is numbered. The column numbers are placed over the first line in the middle of each column, which contains either twenty-one or twenty-two lines. With the exception of columns three to twenty-one, which are considerably smaller, the columns are 22 centimeters in width, and run from 1 to 98, and in the back from 99 to 110. Singularly, the numbers 28 and 29 are missing, although the text continues uninterruptedly. The omission is explained on the ground that the Egyptians considered 110 to be a perfect number, and by this means the writer was enabled to complete his book with the required number of pages.

Dr. von Oefele believes the writer was a very fine caligraphist, but evidently a very ordinary and careless subject, and therefore carelessly skipped from number 27 to 30.

There is no lack of figures in the text, and only a few that are repeated time and again, and they are written in red to denote the quantity of the medicament to be used, while the prescriptions are in black. Another particular feature of the pagination is that up to column sixty the same hand paged the papyrus, while another scribe continued in the pagination in a different manner, although the text shows that it was wholly written by one person only. The second pagination may be the work of the physician who added his (ꜣ) signature after many a prescription, or the purist, who wisely added his signature in paler ink, when that of the physician was omitted.

Script.—The script in which the Ebers Papyrus is written is extraordinarily regular, partly in black and partly in red ink. This form of writing is known as the hieratic, and is one of the three forms used by ancient Egyptians. The others are the hieroglyphic and the demotic. The hieratic is the cursive form of Egyptian writing, and is used chiefly on sacred and medical papyri and on wooden coffins. How early the hieratic came into

1. Papyrus Ebers, vol. I, Leipzig, 1875.

use is unknown, but fragments of papyri in script with those characters have been traced to the I. dynasty. The characters are usually written from right to left. The invention of this script was attributed to Thoth (the Greek Hermes), and was in constant use up to about 100 B. C.

About 300 A. D. all knowledge of the meaning of the characters had died out, and it was not until the discovery in 1799 of the Rosetta Stone (by Boussard, a French artillery officer) that any real progress was made in their decipherment.

Rubic or red occurs in almost every heading throughout the papyrus. Also in the statement of the disorder for which a medical prescription is to follow. Those headings, or rubrics, as they are called, show the use of red colors for such purposes in the most remote antiquity. Dr. Christen,[2] in a chemical analysis of this red coloring, found it to contain red lead.

Synonyms.—In the Ebers papyrus there exist a great many synonyms which are so much like the Semitic vernacular, both in expressions and pronunciations, that one is almost led to believe that the ancient Egyptian belongs to the group of Semitic tongues. The language of the papyrus with all its richness of primitive forms possesses such organic arrangements that a single word can be easily recognized, for if a branch of the same is lacking, it may be readily supplied by one from another dialect. Sometimes an abstract conception or a mental function is combined with different things or actions, perceptible through the senses; ordinarily, therefore, things are easily explained; substances of either material or spiritual character are represented according to their characteristics. Each noun contains one of those characteristics; therefore, there exist as many nouns for the same thing as there are characteristics in it. One of the characteristics of the Egyptian, as well as of the Semitic tongues, is that they had different ways to arrive at the expression of the conception, which, however, were not identical in meaning. It is difficult, therefore, to differentiate the co-existing synonyms. Philologists regard the various shades in order to explain the origin of a conception from different sides.

Age of the Papyrus.—The exact date of the writing of this papyrus has not yet been established. Carious opinions exist. The calendar which is on the outside of the papyrus refers to the eighteenth dynasty, in the sixteenth century B. C., and bears the following inscription: "In the ninth year of His Majesty the King of Upper and Lower Egypt, Amonophis I, the Everlasting." Before the last epithet is the framed name of the king.

The Date of Transcription.—According to Lenormant,[3] a royal library was established at Thebes 1670 B. C. (near the place where the Ebers Papyrus was found), under the direction of Amen-em-an, who took great pride in transcribing fragile papyri, which was at that time falling into decay. Therefore, it is possible that the Ebers Papyrus was either compiled, revised or rewritten in 1552 B. C., or 118 years after the establishment of the library. There is still another important supposition concerning the Ebers Papyrus. According to the discoverer's opinion, it is identical with the hermetic books Περὶ φαρμα'κων which are quoted by Clemens Alexandrinus.[4]

The latter is said to be the greatest of all works deposited in the tomb of Osymandias at Thebes, which, according to Diodorus Siculus, contained 20,000 volumes. Among these were the forty-two hermetic books described by Clemens Alexandrinus, six of which were medical works, on the structure of the body, on diseases, on instruments, on medicine, on the eyes, and on women.

Hermetic, which means compiled, or inspired by Thoth, was any work which was written by a priest according to the inspiration of the god, which would correspond excellently to the Ebers Papyrus. However, Lüring[5] believes that the Ebers Papyrus is much older than the book, and argues that there are certain remarkable differential points between them. Whatever may be the truth, the value of the Ebers Papyrus is the same, be it the hermetic work or a compilation from writings of prominent physicians of the earliest ages.

That the writer of the Ebers Papyrus wrote in 1552 B.C. can be proved in three ways, as Ebers[6] shows, namely, first, by the peculiar shape of the letters in which the manuscript is written; second, by the names of kings occurring in the papyrus; and third, by the calendar which we find at the back of the first column of the roll.

The name of the king in whose reign the Ebers Papyrus was transcribed, compiled or written was Amenophis I of the eighteenth dynasty.

von Oefele[7] calls attention to the fact that the language from columns 103 to 110, which are written on the back of the papyrus, is different from that of the rest of the roll, although the handwriting is the same and shows that there existed different dialects in the land of the Pharaohs, the same as exist to-day in many countries. Dr. von Oefele further states that while the style of writing in the Ebers Papyrus does not go back beyond 1600 B. C., yet the text, in other words, the idioms of the language, belong to a much older period, and that the oldest portions of the Ebers Papyrus very likely reach back into the time of the first Egyptian dynasties.

Lepsius[8] and Meyer[9] believe that it was not only written, but also compiled under the government of an unknown Hyksos king. It is thus generally accepted that the Ebers Papyrus is a copy. Moreover, the many corrections made by strange hands and the many critical, marginal notes found throughout the papyrus show that the document was worked on.

CONTENTS OF THE PAPYRUS.

A large proportion of the diseases known to modern medical science are carefully classified and their symptoms minutely described.

Mention is found of the following diseases, with their treatment:

Diseases of the Abdomen.—Abdominal tumors and swellings, obstructions of the abdomen, swellings in the inguinal region, affections of the stomach, esophagus, pylorus and small intestine, obstruction of these organs, inflammations, diseases of the liver, affections of the intestines, intestinal worms, belching, cramps, jaundice, and chlorosis—Ægyptiaca.

Diseases of the Bladder and Urinary Organs.—Obstruction of the urinary passages, cystitis, retention of urine, polyuria, hematuria, diabetes mellitus, blood in the urine, hypertrophy of the prostate, stricture, dysuria, and strangury in children.

Diseases of the Rectum and Anus.—Tumors, inflammatory abscesses, prolapsus, affections of the vessels, inflammations, obstructions, diarrhea, dysentery, constipation, and pain.

Diseases of the Chest and Respiratory Organs.—Diseases of

2. Ebers: "Die Maasse u. d. Kap. ü. Augenh., p. 71.
3. Manuel d'Histoire Ancienne, vol. I, p. 425.
4. Strom. vol. vi, p. 785, Section 634, ed. Potter.
5. Die ü. d. med. Kennt., etc., p. 13.
6. Pap. Eb., Leipzig, 1875.
7. Prag. Med. Woch., 1905, No. 11, p. 143.
8. Ægypt., Zeit., 1875, p. 145.
9. Gesch. d. Alt. I, section 402.

the bronchi, affections of the lungs, asthma, phthisis, general diseases of the chest, and sequels to diseases of the stomach.

Diseases of the Heart.—Fatty degeneration, dilatation, carditis, angina pectoris, hypertrophy, thrombosis, and anasarca.

Diseases of the Eyes.—Conjunctivitis, iritis, blear eyes, hyperemia, granulations, albugo leucoma, vascular cicatrix of the cornea, corneal opacity, staphyloma of the cornea, inflammation, myiodeopsia, hypopyon, stenosis, contractions, strabismus, xanthelasma, fatty degeneration, abscesses, chemosis, suppuration, amaurosis, amblyopia, cataract, paralysis, blepharitis, injury, calcification of the Meibomian glands, distichiasis, and trichiasis.

Diseases of the Ears.—Impaired hearing, inflammation, viscous humor, suppuration, fetid pus, and foreign bodies.

Diseases of the Nose.—Tumors, coryza, influenza, and mucus.

Diseases of the Head and Neck.—Tumors, migrain, neuralgia, shooting pains, and vertigo.

Diseases of the Scalp.—Tumors, alopecia, superfluous hair, and eruptions. There are also prescriptions to prevent hair from turning gray, to produce its growth on bald heads, to promote the growth, to make it grow on cicatrices, to depilate the scalp, to prevent white hairs from coming in the eyebrows, and to dye the hair.

Facial Diseases.—Sunburn, freckles, wrinkles, discoloration, roughness, and blotches.

Diseases of the Tongue and of the Teeth.—The ailments of the tongue are not specified, but for the teeth there are prescriptions to strengthen them, to make them grow, to heal ulcers of the gums, swelling of the gums, and bloody congestions of the teeth.

Diseases of the Skin.—Pains, pustules, prurigo, swellings, tumors with fetid suppuration, lesions, fistulas, leprosy, eczema, scabies, rashes, itching, burning, cankers, boils, carbuncles, and furuncles.

Diseases of the Blood, Arteries, Veins and Nerves.—Distoma hematobium, extravasations, congestion, coagulation, numbness of the vessels, loss of suppleness, and weakness of the nerves.

Sores and Wounds.—Blows that have cut the flesh, blood in the opening of the wound, gangrene, eschar formation, pus, contusions, cuts, pricks, bites of man or beast, thorns, splinters, etc., and their treatment.

Burns.—Sores which result from burns, poisonous burns, spots or white cicatrices which such sores leave, and alteration of the hair on the burnt surfaces.

Diseases of the Limbs.—Trembling, pain, swellings, stiffness, bent limbs, itching, tumors, lesions, *Filaria medinensis*, tired limbs, perspiration of the feet, sore toes, corns, bunions, callosities of all sorts, and falling nails.

Diseases of the Female Genitals.—Tumors and abscesses in the vagina, inflammation of the vagina, twinges in the vagina, chafing due to inflammation in the vagina, ulceration of the womb, pain in the labia, abscesses of the labia, menstrual disturbances, *fluor albus*, affections of the mammary glands, etc., and their treatment.

Maternity.—Methods to induce abortion, to prevent abortion, to replace a prolapsed uterus, to deliver a woman, to perform version during delivery, to deliver the placenta, to restore the vagina to its normal condition, to prevent retention of urine, and to stop hemorrhage.

Hygiene.—Deodorizations, fumigations of dwellings, perfumes for women to render odor of the house, clothing and breath agreeable, to destroy insects, reptiles, plant lice, to prevent wasps and mosquitoes from stinging, to prevent mice and rats from gnawing things, to prevent birds from eating crops, to prevent rodents from devouring corn in the granary, and to destroy lizards and scorpions.

Not only diseases producing suffering to mankind claimed the physician's care in those days, but he had also to consider the toilet. Seventy-four prescriptions pertain alone to hair washes, dyes, oils and depilatories. After duly reflecting on important anamnestic facts, on the subjective disturbances or disorders, and the objective or demonstrable changes, the physician prescribed the treatment, and a remedy which was either aimed at the principal subjective disturbance of the patient, or at the most striking objective manifested symptom, and often symptoms of the disease were regarded as the disease itself. It is not improbable that in difficult cases consultations were held.

In this papyrus are mentioned over 700 different substances from the animal, vegetable and mineral kingdoms which act as stimulants, sedatives, motor excitants, motor depressants, narcotics, hypnotics, analgesics, anodynes, antispasmodics, mydriatics, myotics, expectorants, tonics, dentifrices, sialogogues, antisialics, refrigerants, emetics, anti-emetics, carminatives, cathartics, purgatives, astringents, cholagogues, anthelmintics, restoratives, hematics, alteratives, antipyretics, antiphlogistics, antiperiodics, diuretics, diluents, diaphoretics, sudorifics, anhidrotics, emmenagogues, oxytocics, ecbolics, galactagogues, irritants, escharotics, caustics, styptics, hemostatics, emollients, demulcents, protectives, antizymotics, disinfectants, deodorants, parasiticides, antidotes and antagonists.

Medicines are directed to be administered internally in the form of decoctions, infusions, injections, pills, tablets, troches, capsules, powders, potions and inhalations; and externally, as lotions, ointments, plasters, etc. They are to be eaten, drunk, masticated or swallowed, to be taken often, once only—often for many days—and the time is occasionally designated—to be taken mornings, evenings or at bedtime. Formulas to disguise bad-tasting medicaments are also given.

The Ebers Papyrus contains numerous other subjects pertaining to the practice of medicine, which the reader will find in the text.

TRANSCRIPTION FROM HIERATIC TO HIEROGLYPHIC.

In 1874, two years after the discovery of the papyrus, at the Orientalists' Congress, held in London, a method of transcribing hieratic texts into hieroglyphics was devised. Ebers, in working on the papyrus, has followed this method in general, still he transcribed a few signs, especially those which seem to indicate vowels, independently of the London method. The latter, accepted in the main by all orientalists, has been modified in its details by all Egyptologists, so that in every work on this papyrus we meet with various interpretations of the written characters.

In 1875 Professor Ebers, with the financial support of the Royal Saxonian Ministry of Education, had reproduced *fac simile* photo-lithographic plates in size, dimension and color, in two magnificent volumes, in large royal folio, illustrated after the hieratic text.

Volume I contains an introduction written by Ebers himself, a general index of the titles of all the subjects, with explanatory notes and plates I-LXIX. Volume II contains an hieroglyphic and Latin glossary of all Egyptian words alphabetically arranged, with reference to the columns and lines where they are found, and plates LXX-CX. Much credit is due both George Ebers and his traveling companion and assistant, Ludwig Stern, librarian of the vice-royal collection of manuscripts in Egypt, for the reproduction and the translation from a language of which so little is known. The study of Egyptian literature, as a whole, is hardly more than three-quarters of a century old, and too much praise can not be given Prof. Ludwig Stern for his labor and the pains taken in the compilation of the special glossary annexed to this beautiful work, which will ever remain an honored testimonial and a monument to both immortal names.

OTHER PAPYRI AND MEDICAL ANTIQUITIES.

There are now in existence seven papyri on the subject of medicine, those at Berlin (large and small), Lon-

don, Leyden, Turin, Bulak and Leipsic, the last being the Ebers Papyrus, which, because of its rich contents, the distinctness of its script and its completeness is foremost in importance.

In order to fill the vacuum between Ebers Papyrus and the writings of Hippocrates, we must not overlook the inscription on one of the "Mastabas," or tombs of Egyptian grandees, which surround the pyramids of Sakkarch, that of Sekhet-enankh, chief physician of the Pharaoh Sahura of the fifth dynasty, 3533 B. C. It describes how he healed the king's nostrils, for which his majesty wishes him "a long life in holiness"; and the compilation of medical works assigned by tradition to one of the most ancient kings, Teta, the successor of Menes of the first dynasty. Manetho,[10] the Egyptian priest and historian, tells us that this king wrote treatises on anatomy and surgery and performed surgical operations with flint flakes. About 3300 B. C., during the reign of Cheops, the builder of the great pyramid, a medical papyrus containing anatomy was found by a priest in a temple. We also know that the Egyptians

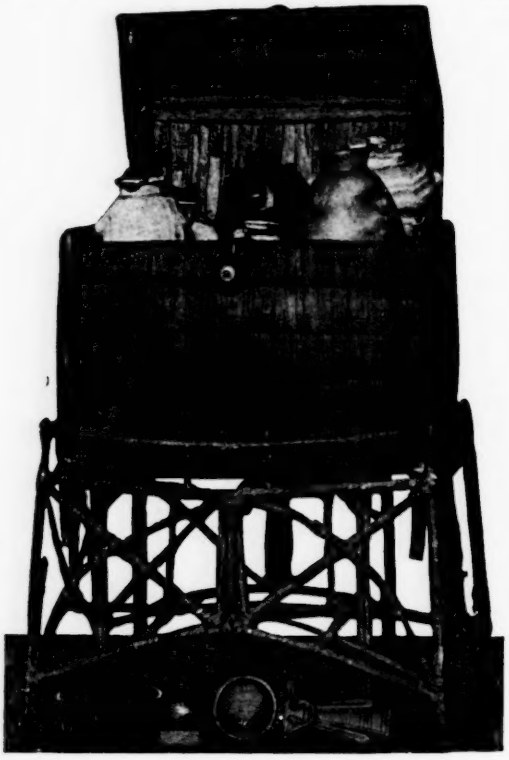

Fig. 1.—A domestic medicine chest of an Egyptian queen.

practiced embalming for over 5000 years B. C., and their process surely necessitated a knowledge of anatomy. There can be no doubt, therefore, that this ancient people knew the structure of the body, and without that knowledge they could not have understood even the symptoms of the different maladies enumerated in the Ebers papyrus.

Pliny (XIX, 5) tells us that the Egyptians examined the bodies after death, to ascertain the nature of the diseases of which they died. There may have been a prejudice against it, perhaps, just the same as there is to-day, but the Egyptians did not shrink from human dissection, consequently the study of anatomy was a matter of course. However, they may not have attained the degree that we might expect in comparison with their other medical knowledge.

10. Ap. eund, p. 54 c.

Another relic of Egyptian medicine is the domestic medicine chest (Fig. 1) of the wife of the Pharaoh Mentu'hotep of the eleventh dynasty, 2500 B. C. It contains six cases, one of alabaster and five of serpentine, with dried remnants of drugs, two spoons, a piece of linen cloth and some roots, enclosed in a basket of strawwork. It was found in the queen's tomb (Fig. 2).

Beginning with the earliest chronology on the existence of Moses, or his five books in the Bible, and considering the doubtful authority and the most accepted authority, namely, Josephus, who believed that Moses wrote Exodus about 1985 B. C., and Bunsen, who stated that Moses died 1523 B. C., we observe a difference of 462 years in the dates assigned to the life of Moses, hence between the two authorities we naturally come to the conclusion that the five books of Moses must have been written between 1985 B. C., and 1523 B. C. Hence, as between the oldest and the latest parts of the Ebers

Fig. 2.—Stone case in which medicine chest was found in queen's tomb.

Papyrus lies a vast space of time, over 3,000 years, the whole dating from various epochs between 4688 B. C. and 1552 B. C., it appears reasonable to conclude that Moses knew Egyptian medicine. Medical literature was considered sacred, and therefore was carefully guarded from the profane eyes of the laity, and was only open to members of the priest class and their matriculants.

EGYPTIAN AND MOSAIC MEDICINE.

Moses, in whatever period he existed, was known to have resided at the court of Pharaoh, and to have received his collegiate education among the wise men of Egypt, and in the same school in which the Ebers Papyrus was written. The immortal Ebers, in his "Aegypten und die Bücher Moses," Berlin, 1868, has already shown the existing similarity of the Bible and Egyptian writings.

Biblical botany no doubt originated with the Egyptians and found its way into the Mosaic writings. The same source led to the knowledge of the plant world and the most remarkable phenomena of plant life.

We find the Bible not poor in the designation of different plants and their various parts. In the very beginning (Gen. i, 11) we read: "And God said: Let the earth bring forth grass, the herb yielding seed and the fruit tree yielding fruit after his kind," etc.

Biblical Medicine.—Moses, who evidently borrowed from the writings and teachings of the Egyptians, gives us in his "five books" information of their anatomic knowledge. In the narrative of the twin birth of Esau and Jacob it is related that the latter grasped the former's heel (Genesis xxv, 26); and in the description of Jacob wrestling with the angel it is remarked that the angel touched Jacob's hollow of the thigh, and put it out of joint (Genesis xxxii, 25); and in the same chapter, verse 32, the "sinew that shrank" is spoken of.

In Exodus (xxviii, xxix) the heart, brow, shoulder, breast, lobe of the ear, hand, finger and thumb are mentioned. In Exodus (xxix, 17) dissection is mentioned, "and thou shalt cut the ram into sections"; some of the visceral portions are also mentioned, such as inwards, caul, liver, fat kidneys; skin also occurs. In Deuteronomy (xxxii, 10) the apple of the eye is mentioned, the lids (Ps. xi, 4), and eyes (Exodus xxi, 24); bones (Gen. ii, 23), and sinews (Gen. xxx, 32); teeth (Gen. xlix, 12); palate, temple (Cant. ii, 3; vi, 7). In Job (xvi, 13) we read of pouring out his "gall" on the ground.

The Bible tells us of physicians (Gen. l, 2): "And Joseph commanded his servants, the physicians, to embalm his father." Isaiah (iii, 7) mentions particularly a healer: "I will not be a healer." We also find that the Jewish prophets, as well as the Egyptian prophets, practiced the art of healing. This may be seen from the narration of a man of God who restored the paralyzed hand of King Jeroboam (I Kings, xiii, 4-6). Elijah brought to life a child, apparently dead (I Kings xvii, 17-22); and his disciple, Elisha (II Kings iv, 18-20, 34-35) performed similar miraculous cures. Isaiah (II Kings xx, 7) cured King Hezekiah of an inflammation by applying a plaster made of figs.

The Bible likewise mentions surgeons and surgery of wounds and injuries in different parts of the body, caused by various weapons—sword, arrow, hammer, etc. (II Sam. ii, 23; iii, 27; iv, 6; xviii, 14; xx, 10; Num. xxv, 8; Judges iii, 21; v, 24; I Kings, xxii, 34; II Chron. xxxv, 23; and many other places). Inflammation and abscesses (Deut. xxviii, 25, 27) are also mentioned. Wounds were treated by the application of wine or oil, bandages or sutures (Isa. i, 6; Jer. viii, 22; xlvi, ii; li, 8; Deut. xxviii, 27). Gangrene and putrid discharges (Ps. xxxviii, 6; Prov. xii, 4; xiv, 30; II Macc. ix, 9) are spoken of.

It is also evident that Moses acquired a knowledge of chemistry from the Egyptians. As Boerhaave aptly remarks, the fact that Moses knew how to reduce gold to powder so as to render it miscible with water, and by this means potable, shows he had acquired a knowledge of chemistry only to be attained by the highest masters of science and art.

The fact that apothecaries (*Rakha*) are mentioned in the books of Moses (Exodus xxx, 25-35, "after the art of the apothecary"; Exodus xxxvii, 29, "according to the work of an apothecary"; Ecclesiastes x, 1, "the ointment of the apothecary;" II Chronicles xvi, 14, "prepared by the apothecaries' art"), and the compounded prescriptions in the Ebers Papyrus, furnish us evidence that a distinct class of apothecaries existed among the ancient Egyptians, who were cultivated pharmacists.

Certainly more competency was required of the ancient pharmacists than of those of our day, for the former had to make their own pills, extracts, infusions, etc., as we can find no proof that there existed manufacturing chemists. Their prescriptions were composed of many ingredients and many remedies. Of the 108 columns in the Ebers Papyrus, seven were devoted to tænia alone.

There can hardly be a doubt that the Ebers Papyrus existed prior to the exodus of the Israelites, and that the Biblical medicine embodied in the so-called Torna shebacsab (written law) had its origin in the valley of the Nile.

Post-Biblical Medicine.—Beginning with the post-Biblical history of medicine, we have the script, which was discovered 623 B. C., but which may have been handed down by oral tradition for many centuries before, and which is called Torha shebalpæ, or oral law. In this work is found a book on medicine (saphar raphout), containing classifications of plants, trees, etc., and their habitations.

We also know that another Egyptian monarch, Nakhepsus of Sais, in the seventh century B. C., wrote on medicine. It is said that he was the first to observe the wonderful virtues of green jasper, which when engraved with a dragon with rays, and hung around the neck, was considered a cure for digestive disturbances.

The employment of numerous drugs in Egypt has been mentioned by both sacred and profane writers; and the medicinal properties of many herbs which grow in the deserts, particularly between the Nile and the Red Sea, are still known to Arabs, though their application has been but imperfectly recorded and preserved.

Homer[11] speaks of the great number of medicinal plants and herbs produced in Egypt, some of which grew naturally, while others were cultivated.

The fame of the Egyptian physicians was spread throughout the ancient world. Homer described them as the "sons of Pæon, skillful above all men." In the third book of Herodotus is the following passage: "Cyrus sent to Amasis (500 B. C.) and bade him for an oculist—the best in the whole land of Egypt." Darius also sent hither for a body physician, and in the time of Tiberius and Nero, Egyptian physicians regularly came to Rome, usually to heal skin diseases. The science of medicine among this ancient people was in the hands of specialists, who were called *Snu*. Homer, and later Herodotus (ii, 37) tell us that there was a specialist for each single disease, and what records we now possess of the Egyptians after thousands of years of continued destruction corroborate the statement of the latter when he says that Egypt swarmed with physicians. They concealed their medical knowledge under the most mysterious formulas, and therefore used a writing or language not understood by the laity. The Latin prescriptions of our modern physicians appear to be an echo of the secret doings of our ancient colleagues.

The subdivision of the medical profession which prevailed among the Egyptians must have had a tendency, in some respects, to advance medical knowledge by specializing it. If we review the contents of the Papyrus, we can not but admit that the Egyptian physicians were well advanced in ophthalmology. The collection of Hippocrates, edited 4,000 years later, did not contain more

11. Odyss., vol. iv, pp. 228-230.

eye diseases, but they were more clearly and more agreeably described. The number of diseases mentiond in the Ebers Papyrus, as well as the profusion of medicines prescribed, is a source of wonder to modern physicians. The ancient Egyptians must have been experienced diagnosticians. All physicians, however, were required by law to employ the prescribed remedies, and in no case to resort to others unless, as Aristotle (iii, 10) states, the regularly authorized prescriptions proved unavailing. Any transgression of this rule of practice, if followed by the death of the patient, was a capital offense. This may have been but a nominal law, or one, as Finlayson says,[12] "held in reserve to check abuses, for the complicated formulas and large choice of alternate remedies indicated in the Ebers Papyrus would seem to show that no great weight was attached to strict adherence to special methods, deviation from which was fatal."

Up to a recent period our knowledge of Egyptian medicine was gathered solely from scattered passages from great writers. Praxagoras (though from Cos, the town where Hippocrates was born, and where the temple of Esculapius was built, lived in Egypt), of whom Galen speaks as the greatest symptomologist and diagnostician, and quotes his treatment for acute diseases, and especially gymnastics, was the teacher of Herophilus (400 B. C.), the first anatomist who made postmortems on cadavers. The former went to Egypt for his medical learning, and established a school for Greek physicians; the latter went for the same purpose and founded a system of pathology.

We have a continuous history of Egypt to the extent of about 5,000 years B. C., and a prehistoric account of 2,000 and a continuous culture known to us to cover about 2,000 years more, hence our continuous knowledge probably extends back to about 9000 B. C.

The Ebers Papyrus, therefore, opens a new era for the history of medicine and pharmacology. The work discloses an astonishing knowledge of a great variety of remedies, and shows that four or five thousand years before Christ there were learned men in Egypt who could make intelligent observations of disease, combine complicated prescriptions and use them with judgment. It is hardly possible to exaggerate the literary, scientific and historical importance of this wonderful papyrus, the most complete compendium of Egyptian medical science that is left to us, and we must acknowledge the fact that the copy of the Ebers Papyrus is the genesis of medicine.

TRANSLATION.

My sole purpose in translating the "Papyrus Ebers" into the English language is identical with that of the illustrious Ebers himself, namely, to bring out the origin and to cultivate the prehistoric knowledge of medicine, and to show that there existed in ancient Egypt nearly 7,000 years ago a civilization in which medical knowledge was in a high state of cultivation and in which the foundation of our present system of medicine was established. A careful study of this papyrus will convince the student that the medicine of to-day is essentially the medicine of the ancient Egyptians. Certainly it was in a crude state and on the same footing as our wearing apparel, both in custom and in fashion. Man has always covered his nakedness from the day that Adam ate of the apple. Garments have developed from the leaf covering to our present style of dress. In our latest advancement of civilization we have doffed the turban and donned the hat; we have cast aside the chiton and have clad ourselves in the frock; we have dispensed with the kilt and adopted trousers; we have thrust aside the sandal and have replaced it with the shoe. A similar evolution has taken place in medicine. New garbs adorn anatomy, physiology, pathology, botany, chemistry and materia medica in general, but the fundamental principles of curing disease still remain the same. Even the various methods in the practice of medicine have not changed. From all historical accounts and from the contents and language of this papyrus, we have evidence that the ancient Egyptians had three different classes of physicians—the regulars, the priest physicians and the conjurers, just the same as we have to-day. Our advancement consists merely in a greater variety. We have regulars, irregulars, faith healers and many others, too numerous to mention.

In my translation I have added commentary notes, the aim of which is to establish the fact that medicine up to, and from, the time of Hippocrates until the present day has been built on the foundation of that of the ancient Egyptians.

It was with great hesitancy that I entered on this very difficult task, by reason of a real distrust of my own ability. My knowledge of Egyptology is but superficial, and yet I have been greatly encouraged by medical men in various parts of the world, to whom I had communicated my intention. On their advice, therefore, I venture to offer this work, not only to fill a hiatus in our medical history, but to bring forth for the first time in the English language the ancient treasure of medical knowledge, namely, "Papyrus Ebers," translated from the original, utilizing the labors of Ebers, Stern, Brugsch, Chasbas, Dümchen, Ermann, Lüring, Lieblein, Joachim, von Oefele, Hirschberg, Scheuthauer, Schäfer, Proksch, Lange, Piehl and many other renowned Egyptologists.

The assistance of the above-named scientists, whose labors cover a period of over thirty years, and their criticisms of one another have enabled me to produce probably the best translation in a modern tongue. I have borrowed from these eminent minds not as a plagiarist, but as a kleptomaniac, who steals for the benefit of others. In no place have I failed to acknowledge the theft by a footnote; therefore, I can only appeal for mercy to those who are always ready to engineer some method of criticism, be it just or unjust. I have spared no pains to render the translation as accurate as possible. In a work involving such an infinity of details and interpretations, doubtful to even more scholarly Egyptologists, it would be unreasonable to expect that no errors or misinterpretations would occur.

While the outline of my work is as crude as that of a pioneer, I trust it will serve the labors of others who are more accomplished.

I now come to that which is to me the most painful part of my duty; that is, to inform you that the immortal Ebers had worked on a translation for a period of twenty-five years. His death, however, unhappily cut short his labors. On opening his last will and testament it was found that in case of death the manuscript was to be burned; accordingly, his will was carried out.

In conclusion, gentlemen, allow me to acknowledge my sincere gratitude to Baron von Oefele, the greatest living medical Egyptologist and ancient medical historian, for his consent to review and to correct my translation of the "Papyrus Ebers" before its publication. I also wish to express my thanks to my daughter, Edith.

12. British Med. Jour., April 8, 1893.

who for seven long years has labored by my side, inspired not merely by the devotion of filial love, but also by the same interest and purpose as that of her father, namely, to cultivate medical history and to elevate the standing of the humane and noble profession of medicine.

70 Bellevue Place.

THE WATER SUPPLY IN SHIPS FROM ITS BEGINNING TO THE PRESENT TIME.*

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(*Concluded from page 1852.*)

CHANGES IN OUR PRESENT METHOD OF STORING AND DISTRIBUTING WATER, RECENTLY PROPOSED.

Certain well-marked sanitary defects inherent in our present methods of storing and distributing water on shipboard must have been noticed by every thoughtful naval surgeon, no matter how brief his experience at sea. These defects concern the water tanks, the pipe connections and the scuttlebutt. To begin with, one fundamental difficulty about the water tanks, located as they are, near the bottom of the ship, is, that it is at times almost impossible for a man in the hold to distinguish the one containing merely feed or other utility water from the one containing distilled water for drinking. Since much might depend on this under certain circumstances, measures should be taken to prevent such a mistake from occurring. A radical remedy has recently been suggested by Couteaud and Girard,[12] who recommended the establishment of two separate holds, one in the forward part, the other in the after part of the ship; one for utility water, the other for distilled water. Again, the danger of drinking water becoming mixed with utility water on board ship is not alone dependent on a mistake in the tanks; it may likewise be traced to faulty pipe connections, as was shown in a recent experience of mine in this instance, the drinking water, as well as the salt water, were circulating in one system of pipes, separated from one another only by certain cut-out valves. The consequence was that neither sweet water nor salt water could be drawn without taking part of the other into the bargain. Since the quantity of salt water thus added to the sweet water in both kitchen and pantry was very large; and since, moreover, the salt water, in this instance, was in fact undiluted sewage drawn from the harbor of one of our navy yards, it could not help being quickly discovered and remedied. One such experience ought to suffice to show the great necessity for the widest possible separation of both tank and pipes carrying utility water from those carrying distilled water. Each should circulate in its own separate system of pipes and be independent of cut-out valves.

Dr. Le Méhauté, in the article referred to above, has placed the whole subject in an entirely new light before the naval medical profession. He has clearly pointed out present defects and suggested means to remove them. The objects to be aimed at are: (1) The protection of the water from impurities that may originate in the present reservoirs and pipes themselves; (2) its protection from the impurities liable to get into it from the outside; (3) the providing of a method for the disinfection of tanks and pipes.

The measures which Le Méhauté suggests to meet these various demands are as follows: (1) Simplify the pipe system and remove all unnecessary parts of it; (2) hermetically seal the entire system and make the water circulate in a closed system of vessels; (3) protect the metallic sides of the system against attacks by water; (4) provide a method to disinfect the system which shall be simple, efficacious and always at hand; (5) adopt steam under pressure as a means for disinfecting the pipes.

It certainly would seem obvious that by reducing the length of the distributing pipes and by removing all unnecessary parts of the system the danger from inside impurities can be materially decreased. Since, perhaps, the greatest danger from impurities lies outside the system, the hermetic sealing of the entire system, from the tanks to the fountains, would almost suggest itself. The dangers lurking around the water tanks from outside contaminations must have suggested themselves to every inspecting officer who has seen them and appreciated them but once. The changes recommended by Le Méhauté as regards the construction of these tanks, in view of these dangers, would seem to be most opportune and very much to the point. They are: (1) Place the manholes on the side instead of at the top of the tanks; (2) provide every tank with a metallic aspirating tube permanently fixed to one of its sides and closed outside by a screw plug; (3) ventilate the tanks through an L shaped pipe, provided at the lower outside end with a tampon of absorbent cotton to filter the air; (4) keep the upper surface free, closed and unencumbered; (5) slightly incline the bottom surface to allow of the accumulation of any deposit of possible iron rust and provide a purging spigot at the most dependent part of the bottom of the tank for an easy removal of the solid impurities collected there. Another suggestion deserving attention in this connection is the one made by Couteaud and Girard.[13] These authors would reduce the large number of small tanks, at present in use, into a small number—say three or four—of large reservoirs or cisterns, containing up to 14 or 15 tons of water each and place them between the two protective decks. They are also in favor of placing the manhole on the side instead of on top.

These suggestions are sound, and every naval sanitarian will endorse them without much hesitation. The hermetic sealing of the pipe system would naturally make disinfection sometime a necessity and hence provision must be made for it. Since it would involve a great deal of difficulty to take the system apart for such a purpose, the method of steam disinfection suggested is the one practically applicable method. For the purpose of disinfecting the tanks, the soldering lamp is no doubt the best means. Whether it is that the pipes are choked up mechanically with iron rust or coal dust, or, whether infected water has passed through them, the method of steam disinfection is equally applicable.

Thus, it will be seen, that hygiene has become exacting. It cannot rest content with half-way measures because these do not meet her ends. It is due to half-way measures that some much useless time and money-wasting experimenting has been done in the past, as we have seen, without producing the desired results. It is also evident that the hermetic sealing of the whole water circulating system and the modifications in the construction of the tanks, as recommended by Le Méhauté, must insure a faultless product inside of them.

* Read in the Section on Hygiene and Sanitary Science of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

12. L'Hygiene dans la Marine de Guerre, Paris, 1905.

* Read in the Section on Hygiene and Sanitary Science of the

Having thus far obtained a perfect water inside of our tanks and pipes, we must aim to get it inside the sailors' stomachs in the same uncontaminated condition. To this end, the scuttlebutt system is the next detail to be improved.

DISTRIBUTION OF WATER.

The problem involved in the process of conducting drinking water from the tanks to the individual in an absolutely pure and uncontaminated condition has never until recently been approached courageously and seriously. It is held by some that the greatest and gravest danger lies in the manner of distributing water on board ships; that infectious diseases are more often transmitted and epidemics spread and kept alive through the common drinking cup than in other ways. Even the individual drinking cup appears to have proved a failure and has been abandoned where it was used formerly, because, if the men did not lose it, they would loan it to one another and thus defeat its very object.

To-day, men in most of our ships get their drinking water from what is called the "scuttlebutt." This is a wooden barrel-shaped vessel, somewhat broader below than above, provided with a brass spiggot near the bottom and varying in size with the size of the ship and in number with the number of men on board. On large ships several of these are placed in convenient places. A common drinking cup of some metal is attached to the spigot by a small chain and this the men use to get their water. At one time the interior of the scuttlebutt was divided into an upper and lower carbon, spongy iron, etc., and the lower compartment containing filtered water. At one time, a long stationary metallic tube was inserted, the lower end being immersed in the water, the upper bent into a right angle and terminating in a mouthpiece through which the men were obliged to suck up their water. This method was in general use in the French navy from 1819 to 1850, when the order was passed for mouthpieces to be made of glass; these breaking too easily, the mouthpieces were ordered to be made of iron, of lead and still others of wood. None of these ever proved entirely satisfactory. In 1809 Lefèvre says of the custom of using the mouthpieces, then in general use: "Besides the repugnance which such a method must inspire of being obliged to take into your mouth a nozzle which was a moment before in that of another, does not this practice open the way for the transmission of contagious diseases from one man to another?" And indeed Fonessagrives had already then recommended that these mouthpieces be made detachable and that they be immersed in water before being used. Bressanin likewise recommended immersion in water. Others recommended a detachable mouthpiece, one that could be increased in the suction pipe of the scuttlebutt and was attached to each person by a cord so as to prevent the wearer from either leaving it attached to the mouthpiece or losing it, or even lending it to another. According to Couteaud and Girard, the scuttlebutt in use in France is made of iron, lined with rubber; it has a spiggot to which the common metallic drinking cup is attached with a chain. They recommended the substitution of a *biberon a bec* for the cup. These *becs*, after being used, to be put into a basin where a jet of hot water may disinfect them. The particular mouthpiece they refer to is made of iron and was designed by chief mechanic Estève of the *Iena*. According to Belli,[14] Dr. Carbone has actually succeeded in getting the individual cannula adopted on board the *Pisani*. On this ship every man is provided with a mouthpiece of bone which he attaches to the scuttlebutt whenever he wishes to quench his thirst. An arrangement of three small elevations around the opening of the pipe at the scuttlebutt obliges the man to use his own mouthpiece to get water. While Belli is convinced that this method is theoretically a good one, in practice, it has shown to have several disadvantages.

The cannulas become clogged easily from dirt in the pockets of the men; they also can be passed from one to another, just as the individual drinking cup. Belli raised the question as to the necessity of all men being obliged to get their water by suction. Indeed, since the necessity for so great an economy, as was practiced in former years, on long voyages, has entirely made way for a more liberal distribution of water, this question is very much in order. Belli wants these suction arrangements abolished and thrown on the scrap heap. In the U. S. Navy this arrangement has never been popular, but the common drinking cup is in general use.

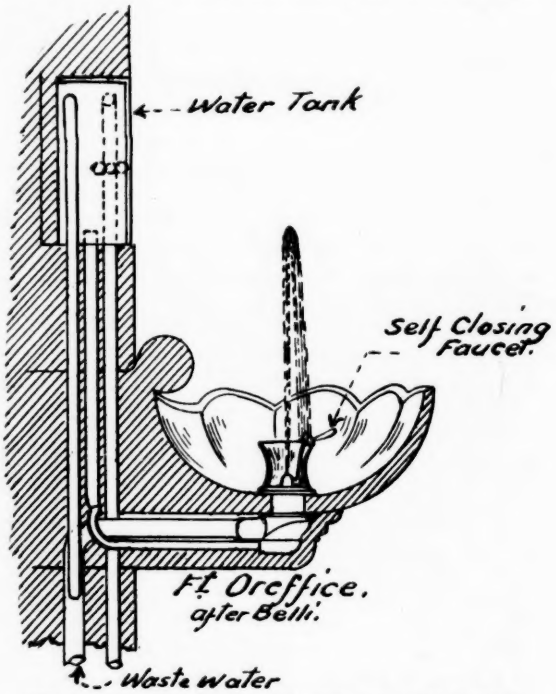

Fig. 7.—Showing water tank and self-closing faucet.

Within recent years, water fountains have been recommended for use on board ship to take the place of the old scuttlebutt. Since, with these fountains alone, the question of the common or individual drinking cups remains the same, only special fountains can come up for consideration. The need for a hygienic distribution of water on board ship is very much the same as it is in the case of public schools and other public places. In 1894 an Italian engineer named Torelli exhibited a fountain at the National Exposition at Milan. This fountain is in actual use in the public schools of Milan. It consists of several little spouts fed by water under pressure and arranged in a circle inside of a basin. Each orifice is protected by a funnel, 15 cm. in height, perforated at the bottom and not permitting the drinker to touch the orifice with his mouth or with his fingers. In drinking the boys simply lean over the spout and allow the water to flow into their mouths. A similar fountain has been constructed by Dr. F. Accorimboni for the normal schools at Foligno in which the jet projects horizontally (Fig. 8) and in which the nozzle is protected from contact with the drinker's lips by a metallic screen.

14. M'Belli, Innovazioni igieniche sulle nave da guerra—ann. di mod. navale. Annovifasc. vol. III, 1900.

The fountains of Milan and of Foligno, however, are without a regulator and the water flows constantly. Such a regulator is found on the fountains designed by the engineer, Oreffice, and introduced by him into all the public schools of Padova and Venice (Figs. 7 and 9). The little jet is provided with a spring lock which the drinker opens at will and which closes automatically, thus avoiding unnecessary waste of water. The little short orifice is protected by a conical cup, the upper margin of which is armed with a metallic fringe which

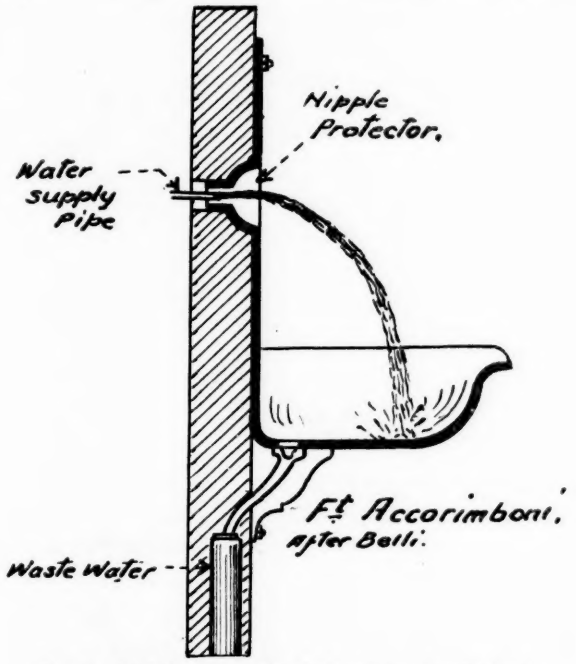

Fig. 8.—Drinking fountain designed by Accorimboni.

does not permit the drinker to approach it with his lips. The slight overflow rinses the walls of the cup and passes directly into the waste pipe.

Belli suggests that the advantages of these two fountains combined might, perhaps, be adapted to ship's use. A proper combination, no doubt, would do away with the risk of infection and at the same time insure the economical use of drinking water.

Fig. 9.—Drinking fountain devised by Oreffice.

It certainly has become highly desirable that the old-fashioned scuttlebutt with the common drinking cup as now in common use in the navy be displaced by some form of reservoir of distribution, answering to the present requirements of personal hygiene. Since it has become recognized beyond question that the common drinking cup is one of the worst means of spreading contagious diseases on board ship, efforts are now being made in almost all the navies of the civilized world to do away with it.

Le Méhauté is very strongly in favor of the individual pipette. The fountain which he prefers is shown in the adjoining Figure 10, which shows the pipettes in place. He proposes that a number of these pipettes, duly sterilized, be placed in a vessel near the fountain where any man may take one, put it in place, drink and then put it into another vessel, where it remains until again sterilized by boiling in soda.

DISTILLED OR STERILIZED WATER.

An important sanitary question has only recently been raised by Le Méhauté[15] of the French navy. The question asked by Dr. Le Méhauté is whether it shall be distilled or sterilized water that is used on vessels of the navy or whether both be used under a given set of circumstances and conditions. This question is important and destined to receive considerable attention by naval sanitarians in the near future.

It is, of course, of fundamental importance to hygiene to furnish such a water as shall in composition correspond as nearly as possible to a natural, unpolluted drinking water. There is no longer any doubt about

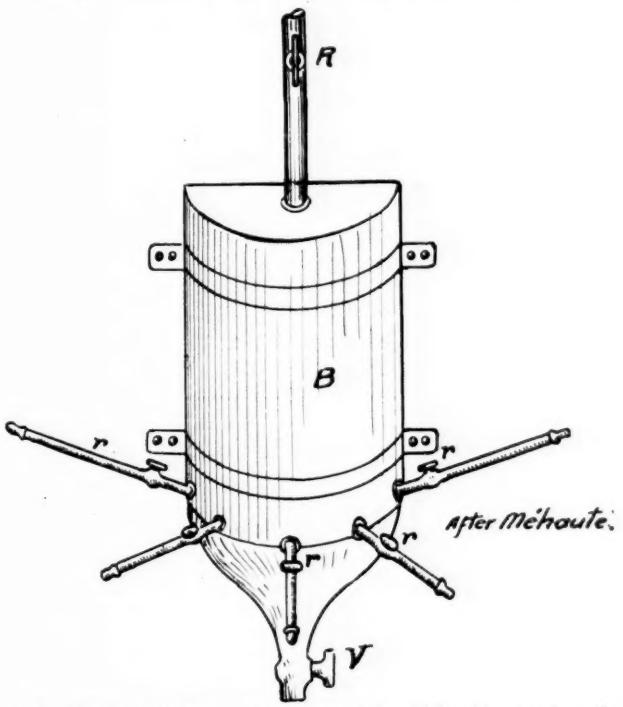

Fig. 10.—Drinking fountain favored by Méhauté, showing the pipettes in place.

the fact that distilled water for ship's use is no such absolute necessity as it was in years gone by. Since the wooden casks have been generally done away with and a cement lining for iron tanks was adopted, water put into them no longer putrefies, but keeps sweet for an almost indefinite length of time. Most of the large passenger steamers have, for many years past, taken their water supply directly from the water mains of the port in which they happened to be and filled their tanks and double bottoms with it. Steamers rarely resort to distillation, though legally obliged to carry distillers on board, on account of the short duration of the voyages they make. Although vessels of war invariably carry distillers, they, too, fill up with sweet water before leaving port and distill only on long voyages and after their sweet water supply has begun to give out.

15. Arch. de Medicine Navale, Nos. 9 and 10, 1904.

It must be admitted, perhaps, that a sterilized water is more nearly a natural water than is distilled water and as such deserves the preference. The general desire on the part of all civilized governments at present is becoming more and more evident, namely, to make every effort to surround their men-at-arms, whether ashore or afloat, with the most sanitary conditions possible. Already the French war department has begun to introduce water sterilizers in large numbers into the soldiers' barracks, and naval stations are being supplied with them. Le Méhauté strongly urges the introduction of sterilizers into the navy, arguing as follows: "Certain vessels of the navy are destined to remain for a long time on foreign stations and others are obliged to make long cruises, visiting places in which the supply of water is not always good. For such ships distilled water is a necessity. Many other ships, however, stay on the home station or visit places in which the water supply

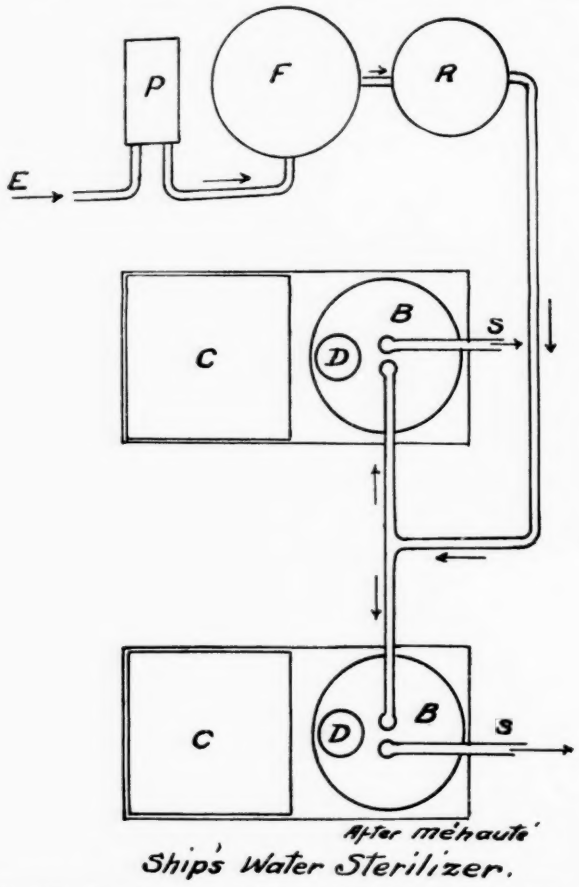

Fig. 11.—Showing the principles of the sterilizer which Méhauté proposes for adoption. P, water reservoir; F, pressure filter; B, where hot water gives off heat to incoming cold water; C, the heater; D, apparatus where precipitates are removed; E, where water enters; S, where sterilized water makes its exit.

leaves nothing to be desired and where, consequently, these ships may supply themselves with all the water they need. Such water, to eliminate the last possible chance of doubt, need only be sterilized." Méhauté, moreover, says of sterilized water that it bears the same relation to distilled water as does natural food to unnatural or canned food and that it would be both unwise, uneconomical and unhygienic to drink distilled water or to eat canned food when the more natural products were available.

The principal reasons for substituting sterilized for distilled water, in which we must all agree, are three: (1) Distilled water is expensive and sterilized water is not. (2) Distilled water is not a natural water; sterilized water answers more nearly to that description than does distilled water and should, therefore get the preference. (3) Distilled water is often offensive; sterilized water is never offensive and always safe, being germ free. Certain objections have, however, been raised against the introduction of sterilizers by Couteaud and Girard,[12] the principal ones of which are the following: (1) The inconvenience of having on board two systems of water purification, since distilling can not be done away with and must remain the last resource; (2) the sterilizers have not worked well either in France or China, where they were used during the campaign of 1900-1901, on account of the hard Chinese waters (Jacquemin). It is also not inconceivable that the different parts attached to the sterilizer might become sources of infection.

According to Le Méhauté, the sterilizer Salvator can be made to produce one ton of water at 7 centimes in French money. Professor Vaillard, at Val de Grace, has calculated that two kg. of coal furnished 2,000 liters of sterilized water, while the quantity of distilled water cost 7 francs the ton. According to Couteaud and Girard, Chief Engineer Danoy has made some calculations on the Iena that would not seem quite so favorable. He calculates that one kg. of coal burned in the furnace would sterilize $\frac{5176 \text{ cal.}}{170 \text{ cal.}} = 30$ kg. of water. This same kg. of coal would produce 5 kg. of distilled water; that is, 1/6 the quantity of sterilized water. The actual daily expenditure in sweet water on board

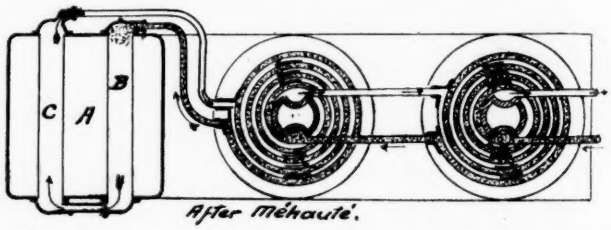

Fig. 12.—This represents schematically the circulation of the water in the recuperator.

the ship was 9,000 liters, of which 800 liters were distilled water used for drinking. These last cost the state $\frac{800}{5} = 160$ kg. of coal. If it was necessary to sterilize all the 9,000 liters of sweet water, the cost in coal would amount to $\frac{9000}{5X6} = 333$ kg., or just twice the amount required to distill the 800 liters of drinking water.

The adjoining diagram (Fig. 11) is intended to show the principles of the sterilizer which Le Méhauté proposes for adoption. In this scheme P represents the water reservoir, F the pressure filter, R the accumulator. B where the hot water gives off its heat to the incoming cold water, C is the heater, D is an apparatus in which the precipitates are removed, E shows where the water enters, and S where the sterilized water makes its exit.

Providing a double sterilizer is installed, each one working independently of the other, no check in the process need be apprehended. The heat required for sterilizing comes in the form of steam from one of the main boilers.

The only part of this sterilizer needing special description is the recuperator (B), in which the sterilized hot water parts with its heat, transporting it to the incoming current of cold water. This piece of apparatus it is intended for the adjoining diagram to illustrate and make intelligent.

Figure 12 represents schematically the circulation of

the water in the recuperator. The white spiral shows the course which the water takes that is cold and to be sterilized; the shaded spiral contains the warm sterilized product. In order to give back to the sterilized water its refreshing taste, a very ingenious apparatus has been employed.

This apparatus is made of spirally arranged metallic plates, inclosing spaces about 26 cm. high and 5 mm. broad and absolutely tight. These spaces are divided into two separate and distinct channels: The one for the cold and the other for the hot water. The cold water takes the direction toward the heater, the sterilized water passes on the inverse sense; the one goes from the periphery to the center, the other from the center to the periphery. In this circuit the heat is exchanged.

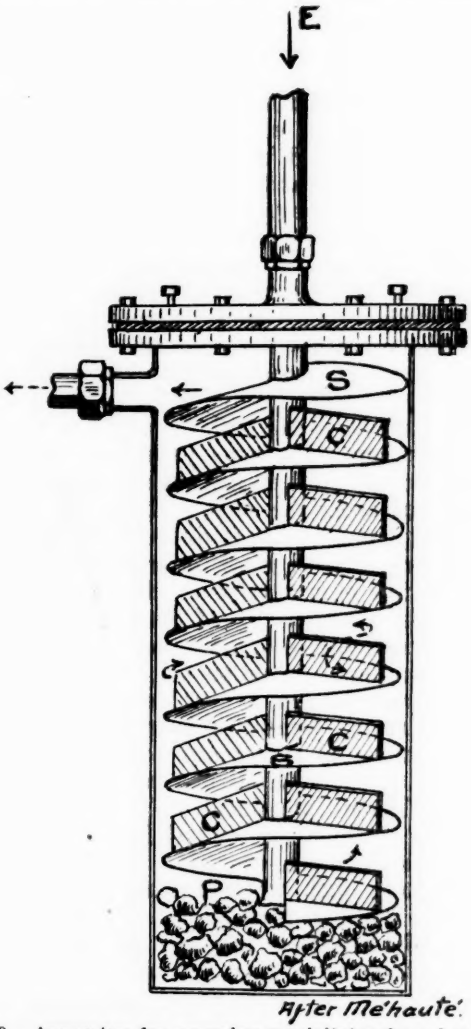

Fig. 13.—Apparatus for removing precipitates from hard water.

When the sterilizer Salvator was tried on board the *Caledonian* and the *Couronne* it did not give entire satisfaction. Preliminary trials demonstrated the necessity of a filter and an attachment in some form for the removal of the precipitates formed during the boiling of an especially hard water. Both these desiderata having been met, the sterilizer works without a fault.

The more interesting part of these two additional pieces being the "detartarizor," a brief description will be of interest.

This apparatus (Fig. 13) is intended to remove the earthy precipitates from hard water that formed during boiling. The water enters at E, passes through the central tube to the bottom of the apparatus, where it enters a pile of rough stones, it then gradually rises along the spiral S which carries the vertical plates C intended to retard its progress, and thus compelling it to leave its suspended solid particles behind. The cleaning of the apparatus is very simple. It suffices to remove the cover, to take out the screw-like central part and clean it with a solution of HCL in water, 1/50.

With these two improvements attached, the French ministry of marine has made new trials which have proved unusually satisfactory, according to Le Méhauté, and the report made to him by Dr. Plagneux, the medical director at the depot at Cherbourg. According to these, the sterilizer has worked already for six months without needing any cleaning.

The preceding summary of the water question on board ships contains all the more important features of hygienic interest to-day. The proposed substitution of sterilized for distilled water may seem new to some of us, but it is a question which can not be evaded and which must be answered squarely in the near future.

With such a system as has been proposed by Le Méhauté, we might even question altogether the necessity of sterilization, except perhaps when the water in the tanks or in the pipes or fountains had from some cause been subject to infection or was under suspicion of being infected. With tanks lined with cement, closed on top and connected with a closed and clean system of pipes, pouring their water into a fountain provided with individual and sterilized pipettes, the chances of any possible infection of the water, as well as its transmission from man to man, seems infinitesimal and reduced to a negligible minimum. It is, however, just this negligible minimum which an exacting and consistent hygienist must try to eliminate.

There is no subject within the whole range of naval hygiene in regard to which the prospects for the near future appear as bright and as promising; none concerning which we are as near a satisfactory solution as with the water question on shipboard. At the same time there is no other problem the study of which would lend itself so well for illustrating the slow but sure and progressive influence of hygiene and sanitation on human affairs, near and remote, as does the story of the gradual evolution of the water question on shipboard from the earliest to the present time.

DISCUSSION.

DR. DENSLOW LEWIS, Chicago, referred to the fact that distilled water may become distasteful, and at times even repulsive and somewhat injurious. He asked if attempts have been made to dissolve any of the normal constituents of water in distilled water with a view of obviating any unfavorable effect on the gastric mucous membrane.

DR. H. G. BEYER replied that Fonssagrives, the famous French naval surgeon, recommended the addition of small quantities of salines years ago, but the practice did not become popular. Water that is distilled from salt water under ship's conditions is not an absolutely pure product. Chlorin and a few other things were found present constantly at the time Dr. Beyer was engaged in making daily analyses for months.

DR. C. E. WOODRUFF, United States Army, said that in hospitals he had tried the use of salts in distilled water. There is great trouble in getting good water at a number of places, but the use of salts has never been tried to improve the general water supply of the post; it is entirely too big a problem for that. But for patients Dr. Woodruff thinks it is easy to put up salts to imitate any mineral water, making it, say, by the gallon. This will obviate all gastric irritation, but it is entirely too big a problem for an entire post.

DR. L. M. POWERS, Los Angeles, Cal., remarked that a great deal of the trouble with distilled water is due to its not being

entirely aërated rather than to its want of mineral contents. He thinks aëration very important.

DR. H. G. BEYER agreed that aëration has a great deal to do with it, but he declared that, strange to say, the modern idea seems to be that these air injectors which were in use formerly, have been entirely eliminated. Some say they are dangerous; they want them eliminated because they introduce millions of germs and other things, which make a filter necessary, and which it is the modern aim to do away with. Another reason for doing away with the aërator is that the water may be depended on to aërate itself, and this is actually the case. Unless the filter is carefully watched it will become a source of infection rather than a means of the prevention of infection. Dr. Beyer said that the water aërator and cooler which he mentioned is a very excellent device for small ships in which the tank capacity is not sufficient to keep the water long enough in the tanks to cool it after being distilled, and if the distilled product is properly protected from impurities by strainers, a distilled water can be produced that is free from dust. The fact remains, however, that the water ought to be aërated to make it palatable.

DR. M. L. PRICE, Baltimore, referred to aëration by sterilized air. There is a surgical instrument used to sterilize air, which seems to be very practicable, and he wondered if it could be used to sterilize air for aëration of water.

DR. L. M. POWERS, Los Angeles, Cal., referred to a milk evaporating plant in which the air is forced through a pipe into the vat and trays of cotton batting are placed in the stack so that the air has to pass through the cotton and is thereby filtered. Dr. Powers knew of a fish commissioner who used an atomizer so as to mix air with the water to a great advantage. He thought that a method could be devised for sterilizing the air before using it to aërate the water and thereby supply the necessary oxygen without infection.

DR. H. G. BEYER said that the object of admitting the air into milk during the process of evaporation is more to facilitate evaporation than to aërate it. In distilling water, if air is allowed to pass through the water while it is evaporating in the distiller twice the amount can be produced, and a similar result follows aëration of milk.

PSYCHOSIS OF MORPHINISM.*

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HARTFORD, CONN.

All writers have mentioned the general defective conception of truth and the relation of right and wrong which appears to be a prominent symptom in all persons who use morphia. It is difficult to understand whether this is a veritable paralysis of the higher reasoning centers or a defect of the senses by which distorted conceptions of facts are not recognized. In all probability both conditions exist, and what is termed moral paralysis is a symptom of some condition of degeneration which is common to these persons in the later stages. This symptom practically describes a defect in the reasoning faculties and inability to recognize the value of truth and honesty, also a disposition to conceal the facts and distort them, no matter what their relation may be.

I shall attempt to group some of these symptoms which may be termed the psychosis of morphinism. The first is a palsy of the consciousness of right and wrong and the inability or indisposition to discriminate between the real and the false. The second is an intense anxiety and zeal to explain and to give reasons for a certain conduct and an explanation of why this or that was done. Third, there is noted some local irritation and disorder of the language centers in which thought is expressed in the most extravagant and impulsive way; or in the most secretive, hesitating and doubtful words. A fourth psychosis is a morbid impulse to deceive, to take advantage, or a keen delight in swindling, misrepresenting, and acting out new characters while under the influence of morphia. This condition was first described by me some years ago, and has been confirmed in some marked criminal cases since then.

The first grouping, called moral palsies, is an impulse to live under a mask for the purpose of concealing their exact condition, or taking advantage of circumstances that appear to be favorable to some personal interest. Many of these persons show this paralysis only in connection with the use of the drug. On all other matters they are frank, honest and exceptionally truthful, but in regard to the use of opium and its alkaloids they practice the worst kind of deception and unreasoning prevarication. They often show extraordinary childishness in denying the use of the drug and manifest indignation on being suspected. Sometimes this denial is followed by intense zeal and anxiety to explain the conduct and motives. In many instances great ingenuity will be apparent to trace it to some particular cause, generally to objective things. This I call the second symptom.

In the first the drug taker is pleased stoutly to deny the implication that he is using drugs. In the second his denials are less emphatic, but his explanations of motives and conduct are so faulty and strained as to convict himself. Often these explanations refer to acts that are associated with the use of opium and not with matters outside. Some patients will be scrupulously honest and exact on matters of observation and in opinions concerning the surroundings, but in securing and using opium they are falsifiers of the boldest class.

There seems to be in many instances a growth and an increase of this particular psychosis, which begins first with mild denials of the use of the drug, then going on to shrewd explanations and reasons, and finally culminating in profound deception and general demoralization on every topic and subject relating to themselves and environment. Generally, long before this stage is reached, changes of appearance, eccentric conduct and indifference to the opinions of others with general degeneration become prominent. The stage of profuse explanation is sometimes very childish and lacking in skill to conceal the real condition. In others it is bold and ingenious, with unusual cunning and apparent frankness. Running through this is a vein of intense egotism and pleasure to convince others of great honesty and an apparent good judgment and sagacity to discriminate as to the value of certain impressions. Thus, in one case, a concealed morphin taker, who detected the slightest suspicion in other persons concerning his conduct, would drop everything and take infinite pains and care to disarm this suspicion.

A clergyman, who had reached this stage of morphinism that attracted attention, spent a large part of his time in explaining to his friends that he was innocent and was misjudged. Each new explanation, by its intensity and minuteness, failed in a degree and required other efforts and explanation. This man was able to go on with his professional work in the pulpit without comment, but eventually resigned and disappeared. Often this stage is associated with a general failure of vigor and previous mentality. He is duller, sleeps in the daytime, is awake at night, blunders in business affairs, makes mistakes in correspondence, forgets proper names

* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

and neglects to pay bills, together with the great variety of marked psychical changes. In business he may be more acute and accurate in collecting bills and contracting debts, or the opposite. A certain irregularity of thought and conduct and a suspicion of others are all typical of his condition.

In a third psychosis, marked from the beginning or only seen in the later stages, is paralysis of the language centers. The manner of expression is changed. Whether loquacious or taciturn, the words that are used to express the thoughts are strange and unusual Often they consist of expletives and forcible exclamations, low figures of speech or low slang words uttered in a wreckless way, or the opposite, viz., formal, precise, symbolic expressions that seem rather to conceal than express the feelings of the author. This psychosis is frequently seen in literature, particularly in the variable styles noted in a single article or book, suggesting at once the influence of morphia on the language centers.

A slangy, dogmatic, jerking expression followed by a stiff, pedantic style indicates two stages of morphinism. At the beginning the effects of the drug obscures the consciousness of the value of language and the meaning of the terms used. Later when this wears off, conservatism and secretiveness come on, and the language changes; misty, high-sounding words are used to express the feelings. A great variety of peculiarities in speaking and writing and the sudden change of topics, with apparent inability to keep the mind concentrated on one subject, is very significant of this form of addiction.

DeQuincy had language exaltation, or delirium, but when under the influence of opium he was able to write good English, and careful students of his writings will discover lapses and changes which are clearly due to this cause. One author has described these as defects of consciousness. Another has called them disorders of the sensation, such as hyperesthesia or anesthesia.

There is a marked mental change associated with these symptoms. With it is noted an exaggerated egotism and confidence in the patient's ability to understand the relation of events and shape his conduct so that the real condition may be concealed. In some instances the secret use of morphia exalts some of the senses and depresses others. This may account for some of the confusion states which follow. Probably taste, touch and smell are more or less affected, and the impressions from these disordered senses have much to do in perverting the reason and lowering the consciousness. In the latter stages these conditions are apparent.

A fourth psychosis may be practically called a delirium and morbid impulse to deceive, to take advantage of others, acting out a new character, enjoying the pleasure of taking advantage of others' credulity and the ability to conceal and misrepresent.

It has been noted for a long time that kleptomania was so common that many chronic cases were unable to resist the opportunity to take things. In the police courts it has been noted that some of the shrewdest swindlers, pickpockets and confidence men are addicted to the use of morphia. Under the influence of morphia they exhibit an acuteness of intellect and audacity never seen in the ordinary law breaker, but when the morphia is withdrawn they display the greatest weakness and childishness of manner and conduct.

An example of this kind was that of a man very highly educated and of good social standing who became addicted to the use of morphia and entered on a career of swindling and deception. It seemed to be his greatest delight to go about following the crowds at watering places, hotels and the steamers, making the acquaintances of strangers and securing loans on fraudulent checks, brass jewelry and false diamonds. He had no confederates and never mingled with anybody of the same class. To his friends he represented that he was in the brokerage business, making and placing loans. He used morphia constantly, and after long journeys would return home and remain concealed for days. He carried with him various disguises and changes of clothing, and had a number of cheap crystals set in elegant rings and pins. These he would leave as security for loans made him by strangers. He had numerous letters of introduction and bill heads of prominent firms which he used on all occasions to raise money. His manner was that of great frankness and honesty, and his evident earnestness made friends wherever he went. At times he would solicit loans, giving worthless checks and references or watches and jewelry as security. Then he would pay bills for clothes, jewelry, books or board at the hotel by forged checks, receiving in return balances of money. He would call on leading business men on various plausible pretenses and secure their signatures, which he would copy so accurately on checks that the maker was unable to detect whether they were his own or forged ones. Several times he was arrested, but his great honesty and earnestness of manner completely baffled all investigation. Finally he was detected, deprived of his morphia, and the real condition discovered.

Another man of this class was a sanitarium swindler, and for many years he visited different institutions and was apparently treated for this addiction, but in every instance swindled the proprietor in fraudulent checks and loans on false securities, then disappeared. In a short time he would enter another institution, pay in advance, secure the confidence of the manager, draw back most of the money and deposit checks as securities, then have a telegraphic call to visit a dying mother. This same man traveled on the ocean steamers for two years, making many victims, assuming all sorts of disguises, but finally was arrested and convicted.

A third example was the case of a man who came under my observation charged with larceny. I found it impossible to keep him from the use of morphia. On the trial he was acquitted, but consented to remain with me. I found that he was an excellent type of the Hyde and Jekyll class while under the influence of morphia. His intelligence seemed to be of the most acute character. He reasoned quickly and accurately, was an excellent judge of human nature and adroit to take advantage of every opportunity. If accused of sinister motives, he manifested the honesty and frankness of a saint and could make his accusers regret exceedingly that they misunderstood him. When arrested by a detective he quickly convinced him that he had made a mistake, and his injured innocence seemed so clear that the detective was overwhelmed. He left me to make a visit to a neighboring city, and soon after was arrested in the act of receiving cash for a forged note. He sent for me to confirm his statement that he could not have had such a note and that he was only a patient under my care. So shrewdly did he defend himself that the judge released him.

I found that the criminal instinct to forge notes, sell gold bric-a-brac and do other most adroit pieces of swindling was a veritable delirium and one which he enjoyed when under the influence of morphia. The drug gave him a certain amount of confidence in himself and made him fearless of any results. Of course, he was a moral paralytic. The morphia rendered him more in-

sensible to every consideration of duty of right and wrong, and he was able to judge of the weakness of others and take advantage of their circumstances in the most skillful way. He received a yearly annuity from his father's estate, was independent and not engaged in any business. His swindling operations were undertaken as a pleasure, and any gains he received from them were always used to enlarge his sphere of acquaintance and help him enjoy the pleasure of his avocation. He was a total abstainer and used morphia regularly every day, and was finally arrested, sent to state's prison and died a year later from consumption.

No doubt all such persons are moral degenerates at the beginning before the drug is taken. The use of the drug gives a certain courage and shrewdness which for the time being is an exact representation of the real condition; therefore, it is accompanied with evidence of honesty and frankness and disarms all critics. Of course, a career of crime of this class is of short duration, because the use of the drug can not be kept down to the minimum amount. The stimulating stage grows shorter and shorter and the narcotic stage longer.

One of these criminal morphinists was registered in three different hotels in a certain city. At each place he appeared in a different disguise and could so thoroughly conceal his identity and voice that he was not recognized. In each hotel he swindled the proprietor and several of the guests, and then went away without being discovered. Later he tried the same thing in another city, but for some reason his morphia failed to help him out and he was discovered. This psychosis is fortunately not a common one, but it exists and is recognized among detectives more frequently than elsewhere. A physician who belonged to this class for many years has done much to destroy the good will and confidence in the profession of a certain city. He was continually the storm center of slander, dishonest practices, public libels and other thoroughly disreputable acts. His death and the complete subsidence of all discontent and conflict showed that he was the cause of all the deception and intrigue.

The moral paralysis and ethical failures of morphinists show lesions and defects of the higher centers of the brain which undoubtedly may either be inherited or acquired. A study of a number of persons suffering from this form of addiction shows that both the psychical and the physical suffer alike. We have paid great attention to the latter, but the former has received little or no study.

The gross changes seen in loss of pride and degeneration of personal appearance and sharp denials of the use of the drug are common, but the failure of the higher mentality to recognize duty and obligation to others is not studied. This contribution is along these lines. It aims merely to outline a field that is largely neglected, the study of which will enable us to apply therapeutic measures with far more exactness than ever.

A summary of what I wish to make clear may be stated as follows: The psychosis or psychical symptoms common to morphinism are, first, palsy of the consciousness of right and wrong and inability and indisposition to discriminate the ethical principles or responsibility and obligation; second, a delirious stage of profuse explanation and efforts to conceal and explain the reasons for his acts and conduct; third, a special exaltation or depression of the language centers, with a change in the manner of expression and the use of words; fourth, a veritable insanity to deceive, to misrepresent and to take advantage of the credulity of others, not for any purposes of gain, but for the satisfaction of being able to defraud and mislead, also to act in different characters and to elude the efforts of persons who would discover the condition.

DISCUSSION.

DR. JOHN PUNTON, Kansas City, Mo., said that the psychopathic features of the morphin psychosis are factors that should be of interest to all because of the medicolegal aspects of the subject. There are two features in reference to this that makes it all the more interesting to the practitioner. One is the ethical and the other is the legal side of the question. Some time ago a man went to Dr. Punton's office and stated that he was taking three grains of morphin daily, and that as a result he thought he was losing his reasoning power. Dr. Punton asked his occupation, and the man said that he was a train dispatcher. Dr. Punton wondered whether or not the patient was a responsible man for such a position. Ethically speaking, Dr. Punton has no right to divulge secrets given him in confidence, but he asked a leading lawyer what would be the probable outcome of the case if he should divulge such a professional secret and be sued for it. The lawyer told him that legally he would be held responsible. Only a short time since the *British Medical Journal* reported a similar case, and the newspapers commented on it and declared that under such circumstances the physician's duty to humanity was greater than to his patients. Soon after this patient's visit to Dr. Punton several serious accidents occurred on the railroad, and he has wondered whether the morphin did not have something to do with their occurrence.

DR. G. R. CLARK, Dearborn, Mich., asked Dr. Crothers if he had ever thought of placing those cases that were due to morphinism alongside of the cases of minor epilepsy and studying them together for six months at a time. Dr. Clark thinks that the same principles are at the bottom of each. The application of morphin in a case of epilepsy, plus the condition of the mind that always goes with that condition, would be very likely, Dr. Clark said, to create this condition of the mind.

DR. T. D. CROTHERS said that without doubt in many of these cases there is evidence of an epileptoid taint. Why the continued sedation of the sensory centers should produce exaltation of reasoning and mental activities along certain lines is a phenomenon yet to be explained. The chief of one of the large detective offices of New York City told Dr. Crothers that the most dangerous and difficult cases to detect are criminals who used morphia. He referred to an instance of a man who for over four years traveled about the central cities of the country committing the same kind of crime and eluding the sharpest detectives. One day by accident the morphia was withdrawn, when his usual shrewdness failed and he was arrested. He had a large circle of friends, came from a good family and was highly educated. After a prolonged study it was decided that he was insane and he was permitted to go out under the care of his friends. Within a very short time he entered on another scheme of swindling by making contracts for lightning rods. His great skill consisted in ability to disguise himself and to go back over the same section of country, repeating his swindling schemes more successfully than ever. So long as the man was using morphia regularly he succeeded. These patients develop symptoms of insanity on removal of the drug and are placed in asylums. At present their recognition before this stage is reached is exceedingly difficult, and this study calls particular attention to a new class of psychoneuropaths who are criminals in acts unknown before.

The Great Black Plague.—Tuberculosis has been designated as "the great white plague"; with equal fitness venereal infection may be termed the great black plague", since it most aptly typifies "the pestilence that walketh in darkness." It infects unseen the social body; the vast mass of disease and misery thus engendered is concealed from observation so that there exists on the part of the public the densest ignorance respecting the ravages of an infection which, working in disguise and darkness, ramifies through every rank and order of society. At the present advanced stage of preventive medicine, it may be considered a reproach to sanitary science that this large and important class of diseases is absolutely neglected by the sanitary officials.—*Charities.*

COMPARISON OF THE QUICK AND THE SLOW METHODS OF THE TREATMENT OF MORPHINISM.*

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Perhaps an explanation of the title of my paper would make it a little more clear. We will call all forms of treatment where the morphin is withdrawn at once, or where it is withdrawn within five or ten days, a quick method, and where the reduction is gradual and slow and extends over a period of several weeks or months we will term a slow method.

There has, within the past few years, been much advertising of quick cures for morphinism. Nearly every newspaper and magazine, and I am sorry to say some medical journals, contain one or more of these advertisements, and as it has been for the past dozen years my exclusive business to treat narcotic and alcoholic patients I have been much interested in searching for the best method of treatment. I have investigated several of the so-called three, five and ten-day cures. At none of these so-called quick cures do they do anything like what they advertise to do. The morphin is withdrawn within the specified time in some instances, to be sure, but the patient is far from being restored to his normal condition. Often they are in a very much worse condition than as though they had never taken any form of treatment. Hydrobromate of hyoscin is probably the remedy used in all these so-called quick cures. When the remedy is given to certain individuals in proper doses it apparently does remove the desire for morphin. The patient recovers from his hallucinations after five to ten days, soon begins to have an appetite and makes a fair recovery within a few weeks' time, but unfortunately this favorable ending is not the rule but the exception. It appears impossible to decide in advance which patients will tolerate the remedy and be so favorably influenced, and which may be permanently injured by the use of it. While I believe that death from the use of this drug is rare, mental derangement is common. I have known four patients where the mental equilibrium was not restored for several weeks and one patient that was in the insane asylum for six months, when she had somewhat improved and was discharged, but she has never yet returned to her normal condition, and it has been now more than three years since she was released from the asylum.

I have a patient under treatment at the time of writing this paper who was taken to an institution where they advertise to cure the morphin addiction in from 24 to 30 hours. Two weeks later his friends were notified by the physician in charge of the institution that the patient was insane and that he would probably die, and they had better take him home. He was brought to my place and two nurses were required to care for him for two weeks, and he had to be constantly watched for over a month. He was taking as much morphin when he came to me as he did before he took the hyoscin treatment. Now, at the end of two months, he is free of the morphin and seems in a fair way to regain his mental balance.

Dr. Crothers reports having tested the effects of hyoscin in several cases of morphinism and also in alcoholics and always with bad results. In each case delirium with hallucinations and delusions, came on after the second or third dose and continued from two to four weeks. In three instances the delirium lasted two months, and in one instance the mind did not recover and the patient was placed in an insane asylum, where he still remained two years later. Two alcoholics never recovered fully; while not drinking, they have become mild cases of dementia, with great prostration. He also reports a case of a physician who treated himself with large doses of hyoscin, who died suddenly, and that there were reasons for believing that this drug was the cause of death. Also another case treated by a physician with large doses of hyoscin and the morphin removed at once; the delirium lasted for two weeks, then suddenly terminated in coma and death.

Dr. Wagner reports several cases that he treated in the Cleveland City Hospital with hyoscin hydrobromate. He says that this treatment is not devoid of danger, and it is most important that no case be attempted without a special nurse day and night during active treatment, so that the patient is not alone for a minute during this period.

Dr. John Punton says that the treatment of morphinism with hyoscin is unsatisfactory and always contains an element of danger. A large percentage of patients treated after this method regain strength very slowly. One physician, with whom I am acquainted and who had been, up to the time of taking the hyoscin treatment, a strong, healthy man, was unable, after eight months, to attend to his professional duties, and I have known several similar cases.

This method of treatment is irrational and unsafe, and while, as I have previously said, there are some patients treated satisfactorily, the large majority are made only worse by the treatment. There has, as yet, been found no substitute or antidote for morphin, while with the gradual adaptive method we have a perfectly safe and sure form of treatment. Every patient not afflicted with some painful complicating malady who desires to be cured and will co-operate with the physician can be cured, and with very little discomfort. There is no class of patients who shrink from pain and discomfort as do morphinists. There is no other class that has so little fortitude. Why are not these unfortunates entitled to our consideration in making their recovery as painless as possible, just as much so as are surgical patients? There is no class that is more desirous to be relieved of their affliction than is the better element in the bondage of opium, remembering that among the many thousands of addicts there are very, very many of the best educated and most brilliant minds, many with a finely organized, highly developed nervous system, who have worked on a high tension, who have either through their own or some other person's indiscretion or carelessness become the slave of morphin. Others who have been unfortunate in having a long and painful illness, when it seemed almost impossible to endure the suffering, have been given the drug until they have not had the necessary will power to discontinue the morphin after they had recovered from such afflictions. These patients are entitled to our very best efforts to relieve them and with as little suffering as possible.

Thousands of persons are to-day enslaved with the morphin habit that would have taken treatment and become free of the addiction did they not have such a dread and horror of the suffering that they anticipate they must endure in being relieved of it.

There have been several forms of slow withdrawal advocated by different men, such as withdrawing a small

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fraction of the daily dose each day or withdrawing a certain amount every third or fourth day. Also the adaptive slow withdrawal.

No patient can be kept anything like comfortable where a certain amount of his daily dose, or a certain part of a grain is withdrawn at a certain time or at fixed periods. Such a plan would assume that every day was the same, that is, that a person felt the same every day and there were no headaches, no neuralgias, no indigestion, and a thousand other causes that will produce extreme discomfort if the quantity of the drug is lessened at such times. Such a system will be necessarily more or less of a failure, unless the reduction is so very slow and is made to extend over a very much longer period than would be required by the adaptive plan. When the above plan is practiced there is sure to be so much discomfort, nervousness and nausea that there will be little or no physical improvement during the period of withdrawal, and consequently there will have to be a longer period of convalescence than as though the patient had been kept more comfortable by the adaptive plan and had been regaining health and strength during the entire time, as a large majority of patients will do.

The adaptive plan, as I practice it, I have described in papers previously read in this section, so that it is unnecessary to go into details. It may be well, however, to give the outlines of the plan of reduction. When the patient comes for treatment he is probably taking from two to four times as much morphin as he requires to keep him comfortable. This surplus may be withdrawn at once. He is also very likely taking one or more other drugs which may be discontinued at once. Perhaps it may require four or five days to find out just how much reduction can be made and still not make him too uncomfortable. We may have reduced the quantity too much and the dose have to be increased a little before we get him started just right. When the quantity has been found that will keep him almost comfortable from one dose time until the next, we make no change in this amount for three or four days, or until the patient is feeling very well, when another small reduction is made, so small that he will hardly be conscious of it. When we are again sure that the amount then being given is going to keep him comfortable, we make another small reduction. These are made only when the condition of the patient has so improved that the reduction will not make him too uncomfortable. Thus we continue the reduction until the quantity used is so small that it can be withdrawn without the patient's knowledge of it. This amount will seldom be more than 1/120 gr. In this way the large majority of morphinists can be kept more comfortable during the entire withdrawal period than while taking the drug themselves. Of course they will require a supportive and tonic treatment, combined with a nourishing diet, during the withdrawal period, which should be continued for some time afterward, depending on their condition.

One of the most difficult and important problems in the management of all cases of morphinism is after they are free of the morphin. Usually within three to ten days after the morphin has been entirely withdrawn they are feeling well and are anxious to get home, and in the large majority of cases it is impossible to get them to stay as long as they should to insure them as much as possible from relapse. For some time after the desire for the drug has been entirely removed there is an unstable, weak and eccentric mental condition, and during this time slight pain, trouble, grief or insomnia will often be sufficient cause to induce him to take a dose or two for temporary relief. Each dose weakens his resistance and the mania is quickly recontracted and is sure to happen if he allows himself to take the first dose. As much time as is necessary to secure a good physical and mental condition should be spent under the personal care of his physician. This is a case where if there is a mistake to be made it is profitable to make it on the safe side.

To recapitulate. The quick cure by hyoscin is irrational, unsafe and unsatisfactory. The diarrhea and vomiting which always occur after the sudden withdrawal of morphin, whether the hyoscin is given or not, which lasts from two to ten days, is very distressing, and the hallucinations, which last for an uncertain length of time are unpleasant, to say the least, and from which the patient may never recover. Relapses, I believe, are much more frequent and convalescence is usually greatly protracted.

The adaptive slow withdrawal is rational, safe and satisfactory. No diarrhea, vomiting, extreme nervousness or any of the severe symptoms shown with sudden withdrawal are ever produced. Convalescence is well advanced when the last small amount of morphin is withdrawn and nearly always rapidly completed. Relapses are much less likely to occur.

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DISCUSSION.

DR. T. D. CROTHERS, Hartford, Conn., said that the subject of morphinism has a personal interest to every physician, because it is one of the most frequent addictions among active workers in the profession. From some studies which he made five years ago and which have since been fully confirmed, he is convinced that at least from 15 to 20 per cent. of physicians in active practice are victims of morphia and spirit-taking. Dr. Pressey's outline of the methods of treatment is very suggestive and demonstrates the efficiency of certain drugs when given with care and skill. Of course, there can be no specifics because the addiction is both a psychosis and a neurosis. All physicians have seen patients make a good recovery by use of hydropathic measures, and often persons recover from the exclusive use of some particular drug. It would not do to reason from this that all patients will recover by the same means. Each case is a law to itself and must be treated individually. There are no rules and no special classes of remedies which will apply to every patient.

DR. H. G. BRAINARD, Los Angeles, declared that he was astounded at the statements made by Dr. Crothers and thinks that it is a sad reflection on the condition of the physician. Dr. Brainard said that he knows that in California there is no such proportion as 10 or even 5 per cent. of physicians who are victims of the morphin habit. He is sure that such conditions do not obtain in the profession throughout the country. He is sorry for the people of Connecticut if there is such a condition of affairs there.

DR. A. J. PRESSEY said that the figures given by Dr. Crothers must be an estimate, as he does not understand how any one could get exact and reliable statistics on such a subject. Dr. Pressey does not think that there is any such proportion of morphin-users among physicians in any part of the country. More than half of the patients he treats are physicians, but that does not mean that half of all the morphin habitués are physicians. Too many physicians take this drug, but Dr. Pressey does not think there is quite 2 per cent., perhaps about 1 per cent. He does not know just how to get the exact figures.

DR. T. D. CROTHERS, Hartford, Conn., said that the facts may be startling, but the evidence on which they are based fully sustains them. A general study of the habits of physicians in four of the largest cities of the country showed that from 10 to 15 per cent. were drug and spirit-takers. In one city a prominent daily paper made inquiries and concluded that at least 15 per cent. of all persons practicing medicine, includ-

ing members of all the schools, were spirit and drug takers. In other cities the percentage has been estimated as high as 20. In one city over 11 per cent. of all physicians were known or reputed to be using drugs. Dr. Crothers said that he was not prepared to defend any exact statistical percentage as indicating the use of drugs and spirits among the profession, but the discussion of this subject for the past five years since his first study of the habits of 3,500 physicians which were made at that time have amply confirmed the original conclusions. One of the reasons for this is the failure of teachers in medical colleges to make prominent the dangers from both alcohol and opium. The young graduate seldom has any knowledge of the risks and perils from indiscriminate use of these drugs, and as a result many of the profession become victims at first secretly, then openly. This is one of the great personal dangers confronting the profession that should be studied and removed in the near future.

LAWS CONCERNING TEACHING HYGIENE.*

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PROVIDENCE, R. I.

It has recently been my work in another medical society to compile and analyze our present laws relating to the teaching of hygiene, 45 state and 1 federal, all more or less elaborated. This time-consuming task was undertaken with ideas that I have been compelled to alter radically in the progress of the study. My anticipations were based on certain general—somewhat pessimistic—statements in lay, scientific and medical current literature; but the exact details now reported should be known to all physicians interested in preventive medicine.

It is not my intention to discuss this legislation further than to give the facts as they stand in the present laws.

The laws existing in 1903 (none have been altered since then) are published in the *Bulletin of the American Academy of Medicine,* April, 1904, as a preliminary report of the committee to investigate the teaching of hygiene in public schools. The details of all the statistics I shall give can be found in appendix A of the first installment of the committee's report published in the *Bulletin,* June, 1905.

It is well known that the initiator of public sentiment that has resulted in this legislation extending over all territory under our jurisdiction, was the Woman's Christian Temperance Union. Its immediate aim has been and is to have hygiene, in connection with instruction as to the nature and effects of alcohol, tobacco and other narcotics, taught on a scientific basis in public schools as thoroughly as is arithmetic or any other branch required by law. We find accordingly in all the laws the phrase "physiology and hygiene with special reference to the nature and effects of alcoholic drinks and other narcotics." There are several variations in this wording, the reasons for which it is not necessary to discuss at this time. The general interpretation of this clause is that physiology and hygiene shall be taught, including the special topic indicated.

The nine other chief details occur irregularly, most of them appearing first during the five years after the original law of 1882 in Vermont. Their *raison d'ètre* is that it seemed necessary to specify them in order to secure enforcement of the spirit of the law. Any physician who has had experience in our political methods can easily imagine the evasions these laws have met, in consequence chiefly of the opposition of one of the largest commercial interests, as well as from certain social influences; from the indifference or ignorance of many, and from teachers' lack of preparation for teaching science. Without going further into their history, let us now examine these nine legal specifications.

I. SPECIFICATIONS CONCERNING WHAT SCHOOLS SHALL TEACH HYGIENE.

The federal law specifies all public schools, including Indian and colored, in the territories and District of Columbia, and military and naval academies.

Twenty-three state laws specify "all public (common, free) schools."

Twenty-two specify "all schools supported wholly or in part by public money, or under state control," Illinois and New York adding all normal schools, teachers' training classes and institutes, and schools connected with reformatory institutions. Private schools having special charters are "under state control," but the law is not generally interpreted to include them. The law of Michigan, however, specifies all such schools, and the law of Massachusetts all private day schools except those solely for instruction in particular branches. Alabama specifies colleges; Indiana, Maryland, Minnesota, Ohio, Pennsylvania, Utah and Wyoming specify "all educational institutions" aided by state funds. This would include state universities, colleges and normal schools, certain institutions for study of special subjects, schools for defectives (blind, crippled, deaf mutes, feeble-minded); schools for the neglected, destitute and incorrigible; schools in reformatory and penal institutions. I do not know how literally these seven laws are enforced. As a matter of fact, many of the 22 laws specifying simply "public schools" are interpreted to include normal, reformatory and some others.

This detail of the 46 laws differs little anywhere in actual intent, and the same is true of the next.

II. SPECIFICATION CONCERNING PREPARATION OF TEACHERS.

Fifteen states have only the general school law requiring examinations of teachers in all subjects ordered by law to be taught. Thirty specify examination in this branch as in others, Idaho excepting primary teachers; New Jersey, teachers of music, drawing, manual training, etc. The federal law does not mention examination of teachers in military and naval academies.

III. SPECIFICATIONS AS TO WHAT PUPILS IN THESE SCHOOLS SHALL RECEIVE INSTRUCTION.

Fourteen laws do not specify what pupils shall receive this instruction, and 23 specify "all pupils." California specifies all grades, in all classes, during entire school course; Connecticut, "above third grade and below high school;" Illinois and New York, "below second year of high school;" New Hampshire, "above primary grade;" South Carolina, "as far as practicable."

This detail as to teaching hygiene in primary and grammar grades is influenced by the fact that in round numbers out of five million pupils entering the lowest primary grade only one million go on to grammar grades, and only one-quarter of a million enter high school. Nineteen-twentieths of the pupils, and they of the poorer classes, would receive no instruction in hygiene if it were confined to high schools; sixteen-twentieths, none if it were confined to grammar schools.

IV. CONCERNING METHODS AND THOROUGHNESS OF INSTRUCTION.

Fourteen laws make no specification as to whether the instruction shall be oral or by text-book. Nine laws specify "text-books in the hands of pupils;" nine specify

* Read at the Thirty-third Annual Meeting of the American Public Health Association, Boston, September, 1905.

text-books for those able to read and oral instruction for those unable to read. California and Indiana require oral instruction only, but in fact have text-book instruction also.

Twenty-five laws specify that instruction shall be as thorough as in any other branch required by law.

V. SPECIFICATIONS CONCERNING TEXT-BOOKS.

Only 14 laws out of the 46 make specifications concerning text-books.

Eight of these specify that they shall be approved by certain authorities; North Carolina, by the state text-book commission; New Hampshire, by the superintendent of public instruction; Nevada and Michigan, by the state board of education. Michigan's original law (1883) also included approval by the state board of health. This has been eliminated, and now Wisconsin is the only state requiring approval by its health officials. Minnesota requires approval of text-books on hygiene by the superintendent of public instruction and presidents of normal schools; Colorado, by the board of directors of the school district.

Four laws specify the minimum number of pages for instruction as to the nature and effects of alcoholic drinks and other narcotics.

Illinois, Michigan, New York and North Carolina require at least twenty pages in high school volumes, i. e., about one-twentieth of the volume. Below this grade Michigan and North Carolina require at least one-fourth of the volume; Illinois and New York, at least one-fifth, also adding that the pages in a separate chapter at the end of the book shall not be counted in this minimum. This provision was introduced, it is stated, to discourage the attempt to place in the schools old text-books to which a "temperance appendix" had been added to conform with the law requiring instruction in hygiene to include instruction in this special subject.

For the same reason the laws of 14 states specify that temperance instruction shall be given "in connection with the several divisions of the subject of physiology and hygiene;" i. e., that when studying the circulation, or the nervous or respiratory systems, pupils shall at that point be given instruction as to the effects of alcohol and other narcotics on each.

The laws of two states, New York and Illinois, specify that text-books shall be graded to the capacities of pupils of fourth year, intermediate, grammar and high schools.

VI. CONCERNING TIME TO BE USED FOR INSTRUCTION.

Three only out of 46 laws have specifications concerning length or minimum number of lessons in hygiene.

North Dakota has a minimum for oral instruction to those unable to read; at least 15 minutes daily, 4 days each week. This means an hour's weekly instruction in hygiene, including temperance, or a possible 24 hours yearly, the minimum school year being 6 months.

Illinois and New York, in the lowest three primary grades, require, respectively, three and two lessons each week, each year. If these are 15 minutes long they amount to 7½ hours and 5 hours oral instruction yearly for three years.

Illinois and New York require for text-book instruction four and three lessons weekly, respectively, for ten weeks each year from the fourth primary year to the second year in high school. Text-book lessons are usually 20 minutes. This amounts, therefore, to a minimum of 13½ and 10 hours yearly for six years; somewhat less for eleven-twelfths of the pupils who do not go through all grammar grades nor continue in high school.

We see from the above that the greatest requirement of any of the three laws is 24 hours minimum oral instruction yearly in physiology and hygiene, including temperance instruction; the other two states not exceeding a minimum 13½ hours for either oral or text-book teaching. The usual minimum time given to either reading and writing, geography or arithmetic is not far from 40 hours yearly. Therefore the laws of Illinois, New York and North Dakota can not justly be said to make undue claims for the subject of health. Certain other states in some schools give even more time to the subject.

VII. PUPILS' EXAMINATIONS IN HYGIENE.

Illinois, Iowa, Ohio and New York specify that pupils must pass the same tests in this as in other branches.

VIII. ENFORCEMENT OF LAWS.

A law, whether good or bad, is not infrequently futile because no one is interested in enforcing it or because, if interested, he has no means of overcoming the hostility or inefficiency of some official. Experience has proved the wisdom of providing a model law with three powers. The duty of enforcement must be definitely placed, the method of enforcement detailed, the penalty for non-enforcement indicated, and provision for complainants is sometimes made. In the legislation under discussion experience seemed to indicate that these provisions were sometimes desirable.

The duty of enforcing these laws is specifically assigned by 31 states, usually to certain local school authorities, occasionally adding the state superintendent or county board.

IX. REPORTS AND PENALTIES IN CASE OF NON-ENFORCEMENT.

Special reports from special sources are stipulated by 13 of these 31 states. They may be from teacher or other local official, or from any citizen or head of family, to some local or state official, or by the state superintendent in his annual report to the public. The report is frequently made to the official who pays out school money.

Penalties for non-enforcement of laws are specially mentioned by 19 of these states. They vary from removal of any guilty official from office, or revocation of teacher's certificate temporarily or otherwise, to loss of salary, or fines from $5 to $200 against any guilty official, or loss of all or part of state appropriation to school, city or district.

Delaware and Washington specify the officer of the law who shall recover the fines. Ohio and Washington specify what shall be done with said fines.

In states where no special mention is made of the enforcement of this law there is the general school law requiring teachers' compliance, subject to dismissal, etc.

I now beg to call your attention to the opportunities which these laws offer for the introduction of any alterations in the present teaching of hygiene. It will be observed that:

1. No law states what shall be taught as to the nature and effects of alcoholic drinks and narcotics; nor that total abstinence shall be taught.

2. No law prevents the teaching of hygiene through "domestic science," physical training, biology, medical inspection; nor from other viewpoints than physiologic, as economic, or sociologic. All these methods have be-

gun and are progressing along with our growing acquaintance with the subjects.

3. No law requires indorsement of text-books by the Woman's Christian Temperance Union.

4. Forty-two laws do not stipulate the space for temperance instruction in text-books on hygiene. Forty-three laws do not specify the number and length of lessons in hygiene (including temperance).

Or, in other words: These laws making the study of physiology and hygiene mandatory, as are other essentials of common education, provide opportunity to introduce text-books, methods, teachings, for any interested in hygiene who have the capacity to do it. They evidence in their details the intention that, so far as the law can secure it, the teaching of health shall be on a par with the teaching of mathematics, language, and physical environment. Certainly it ought to be. The laws are not hindrances, but proffer openings—more than proffer, they command the work to be done.

It is not the province of this paper to discuss the kind of work now doing, nor the kind of work that ought to be done, nor how a change, if desirable, can be effected; but whoever wishes to make a change must accomplish it not by expending vitality and time in altering laws, but by convincing school authorities that some other text-book or method will produce better results than those already in use.

A CASE OF BRAIN TUMOR.*

JULIUS GRINKER, M.D.

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CHICAGO.

Patient.—M. M., a Lithuanian laborer, aged 28, entered Cook County Hospital March 14, 1905, and was assigned to the care of Dr. Kuh. The following April he came under my service and remained under my observation until April 28, when a transfer to the surgical side was recommended. Dr. Schroeder performed an operation May 4, 1905, and the patient died May 5, 1905.

History.—Family and personal history are negative and syphilis is denied. He states that his habits were always good and that he never sustained an injury. Three weeks previous to admission the patient began to complain of severe headaches, which were constant and generalized. At about the same time spells of vomiting appeared which seemed to have no relation to the gastric functions. A feeling of nausea always accompanied these vomiting spells, but sometimes there was nausea without vomiting. Somewhat later in the course of the disease attacks of vertigo came on whenever the patient attempted to stand or walk. Then progressive generalized weakness of the entire muscular apparatus became a marked feature. The before mentioned symptoms soon inhibited any kind of work and compelled the patient to lie in bed most of the time.

Examination.—He is a man of medium height and weight, with well-developed muscles, but staggers in attempts at walking. The face appears slightly asymmetrical, though no paralysis or paresis can be detected when the muscles are at rest. The skin is somewhat muddy; there are no eruptions, but a few insignificant scars from a burn can be seen on his back. The panniculus adiposis is fairly well developed. Glandular enlargements can not be detected. Heart and lungs appear normal in outline and function. Liver and spleen are not palpable. The pulse is rather slow and full, with fairly high tension. The secretions and excretions yielded negative results, with the exception of the stomach contents, which were deficient in free hydrochloric acid, but which did not show the presence of lactic acid, Boas-Oppler bacillus nor sarcinæ.

Nervous System: A slight difference in the innervation of the two halves of the face in favor of the left half becomes evident when the patient attempts to uncover his teeth, blow up his cheeks or move his jaw from side to side, but there is no difference on the two sides in transverse and longitudinal wrinkling of the brow and in the function of the orbicularis palpebrarum muscles. The tongue is somewhat tremulous and when protruded deviates slightly to the right. Although there is no paralysis or paresis of any muscles, the grip is rather weak in both hands, but slightly better on the left side. Strength is not appreciably diminished in the lower extremities except that the right leg is not as strong as the left. Coordination is normal in both upper and lower extremities, but the patient at times presents a peculiar staggering gait which is neither of the tabetic nor the cerebellar type.

The superficial reflexes are normal and equal on both sides. The upper reflexes are somewhat brisk, slightly more so on the right side. The left knee-jerk is about normal, the right is slightly in excess. Ankle clonus is barely indicated on the right and doubtful on the left side. There is no Babinski. Oppenheim nor Gordon reflex. Sensation is unimpaired in all its qualities.

Eyes: The range of vision is normal. There was no diplopia, ptosis, strabismus, exophthalmos nor Argyll-Robertson pupil. The optic fundus findings were considered within normal limits by Dr. Brown Pusey.

Mentality: The patient is mostly depressed and worries greatly over his disease and about his family. He never indulged in flippant talk, the so-called *Witzelsucht* of German writers. His speech is rather slow and labored and is quite unintelligible, perhaps partly because of his ignorance of English.

Course of Disease.—The course of the disease was comparatively rapid. At no time was there a temperature, except immediately before death. The pulse ranged from 64 to 90 and only became frequent toward the end, when 150 to the minute was registered.

March 22, 1905, it was noted that the left palpebral fissure was wider than the right and that the left pupil was somewhat dilated and reacted sluggishly to light.

On April 15, 1905, I could easily make out a double optic neuritis. Dr. Brown Pusey, at my request, examined the patient April 18, 1905, and he kindly reports the following: Double papillitis very distinct on left side; not so well marked on right side. No hemorrhages or exudates. Pupils react to light and in accommodation.

The patient frequently groaned from pain and would place his hands over the frontal region as though to indicate the exact location of his pain. Slight physical or mental strain, such as walking or being interrogated about his symptoms, always aggravated the headache. No bruit could be heard over any portion of the cranium and percussion failed to elicit the cracked-pot resonance occasionally noted in brain tumor.

Somewhat toward the end the right-sided weakness previously mentioned became more pronounced, without, however, developing into distinct loss of power. Not even at this time did Jacksonian or other convulsions make their appearance. The patient became more apathetic and was even stuporous at times, but even now he could be sufficiently aroused to answer questions. A skiagraphic picture taken by Dr. Fischkin of the Cook County Hospital showed nothing of value from a diagnostic point of view.

Diagnosis.—Here is a patient with headache, vomiting, vertigo, general weakness, optic neuritis and gradually deepening mental apathy with staggering gait. In addition there is a slowly developing weakness of the right half of the body, objectively demonstrable in the face and arm, but not so well in the lower extremity.

Following the usual rule of dividing symptoms of brain pressure into general and focal symptoms, we can find both sets of symptoms in this case. Among the general symptoms must be counted headache, vomiting, vertigo, optic neuritis, generalized weakness. Of localizing value was the difference in the muscular strength on the two sides of the body, pos-

* From Cook County Hospital.

sibly the more pronounced papillitis on the left side, and the mental apathy and tendency to somnolency. In the absence of symptoms pointing to cortical irritation, such as Jacksonian fits or muscular twitchings of any kind, I considered the neoplasm to be most probably subcortical in location. The right-sided weakness in arm and face determined me to locate the tumor on the left side of the brain in the region of the anterior central convolution bordering the Rolandic fissure and probably extending from about the junction of the upper with the middle third down near to the base, but not involving the base of the brain. This diagnosis was made largely on a consideration of the recent findings of Krause of Berlin, which were published in the *Deutsche Klinik*. In his article Krause states emphatically that our old schemes of cerebral localization have become obsolete and are inadequate for practical needs in brain surgery. In his experience the face, arm and part of the leg center were found principally in the ascending frontal convolution, anterior to the Rolandic fissure, and not, as heretofore taught, in the postcentral convolution. He arrived at his conclusions by his routine method of stimulating the brain with faradism before operating. In his efforts to localize the motor centers he uses the unipolar method instead of bipolar faradization, and he has been able to get uniform results. The motor centers in man, according to his experiments, are situated anterior to the Rolandic fissure, notwithstanding the experiments made on the monkey and with the bipolar method which place these centers principally in the postcentral convolution.

Treatment.—The patient was from the first placed on mixed antisyphilitic treatment. He was given inunctions of mercurial ointment and large doses of potassium iodid, but without any benefit.

As the patient was becoming more stuporous and as internal treatment had failed to produce the slightest change in his condition, I recommended a transfer to the surgical side. On April 28, 1905, the patient was assigned to Dr. Schroeder for surgical treatment, who concurred with me in the diagnosis and the advisability of an operation. It was evident to all of us, judging from the patient's condition, that an operation was indicated as affording the only possible chance of prolonging life. It was my opinion that the tumor was subcortical, and probably situated on the left side in the ascending frontal convolution. The symptoms in this case did not justify an expression of opinion regarding the pathology nor whether the growth was circumscribed or of the infiltrating kind.

Operation.—Dr. Schroeder, assisted by Drs. Quick and Dyas, performed the operation May 4, 1905. For the following notes I am indebted to Dr. Schroeder, who has taken an unusual interest in this case:

"A large osteoplastic flap was turned down on the left side of the head, as follows: A horseshoe shaped incision was first made through the skin, then a small trephine hole through the bone on either end of the incision, which openings were then united by means of the DeVilbiss forceps. The bridge was only partially cut across and the flaps elevated. The dura was then incised and reflected to either side. When the brain was exposed no sort of pulsation could be seen or felt. The soft membranes appeared normal, but a dense resisting mass could easily be felt just anterior to the Rolandic fissure, which appeared to be at some depth from the surface. It was decided to cut into the brain mass with a view of exploring the tumor. A dense mass of brownish tissue was encountered which seemed to extend rather deeply and did not appear to be clearly defined from the surrounding normal tissue. At this step of the operation it became evident that the tumor was not removable and after cutting out a piece for microscopic examination, the operation was abandoned. A drain of iodoform gauze was introduced to guard against pressure from hemorrhage and the dura was sutured with catgut. Marked paralysis of the right arm and leg appeared within a few hours after the operation. The patient was in great pain, moaned constantly and never entirely recovered consciousness. His condition kept growing worse, pulse and respiration became rapid and irregular, until toward the end 160 beats to the minute could be counted. The temperature rose to 106.8 just before death, which occurred on May 5, 1905."

Postmortem Findings.—The examination was made by the resident pathologist and internes at Cook County Hospital. Omitting unimportant details, I find recorded the following anatomic diagnosis:

1. Tumor in the left cerebral hemisphere.
2. Purulent right-sided bronchopneumonia.
3. Acute parenchymatous myocarditis.
4. Tracheobronchial adenitis.
5. Parenchymatous degeneration of liver, pancreas and kidneys.

Owing to a misunderstanding the cord was not removed and, therefore, no report could be rendered.

The brain weighed 1,500 grams and showed no abnormal changes in the membranes. An operation wound in the left hemisphere revealed a tumor at some depth from the surface, situated in the region of the ascending frontal convolution. The neoplasm was not sharply defined from the surrounding brain tissue, except that it was more reddish in color and had a denser consistency. Approximately it was three inches in length, two inches in its widest diameter and it seemed to extend from above downward for a distance of about one and one-half inches. Microscopically it showed the following: With low magnification an immense number of nuclei was the most striking picture. With the high power lens many filamentous processes could also be observed to radiate in all directions without any apparent regularity. The cells are mostly small and have round or slightly oval nuclei. The macroscopic and microscopic appearance of the growth leaves no doubt of its being a glioma.

The case just reported illustrates, among other things, that, no matter how ill-defined, focal symptoms must be present before a localizing diagnosis can be attempted. Without some such signs as unilateral weakness, paresis, or exaggerated reflex, slight aphasia, etc., it would have been impossible even to guess at the location of the tumor.

One symptom of localizing value had not been properly appreciated in our case, owing to the patient's imperfect knowledge of English. I refer to his mental dullness early in the disease, which would have been of distinct value in attracting attention to the frontal lobe as the seat of the neoplasm, had we been certain of his former mental state.

An interesting negative symptom was the absence of Jacksonian fits or muscular twitchings of any kind throughout the disease. Its value consisted in excluding cortical involvement and enforcing strict conservatism from a surgical point of view. Even if epileptic fits had occurred late in the disease, their significance as a focal sign would have been doubtful, as spasms often occur in tumors that originate in the white substance of the brain and gradually grow outward, irritating the cortex.

The indefinite symptoms are easily explained by the fact that gliomata of the infiltrating type are usually of slow growth, and the brain tissue gradually accommodates itself to new conditions. It is not rare for patients with brain tumor to masquerade as subjects of neurasthenia or hysteria on account of their supposed functional symptoms until some one discovers a choked disc or until the patient develops more typical signs of brain tumor.

That the topical diagnosis was correctly made was proved on the operating table and postmortem examination. It is true that we have learned something about cerebral localization, but all we know definitely refers principally to the so-called motor area of the brain. And it would appear that even this supposed definite knowledge must be considerably modified in the light of recent acquisition. Heretofore the motor area was considered to be principally situated in the ascending

frontal and ascending parietal lobes, but principally in the latter. Now it develops that Sherrington,[1] by his recent experiments on the chimpanzee, has found that the motor area was not as extensive as previously supposed, and that it lies entirely in front of the fissure of Rolando, i. e., entirely within the frontal lobe.

Campbell,[2] in his histologic researches, was able to claim the same situation for man. Bolton[3] unqualifiedly accepts the view of the before-mentioned authors. It was reserved, however, for surgeons of the stamp of Krause[4] to demonstrate the truth of these statements on living human beings, anesthetized and ready for operation.

A point worthy of mention in connection with this case is our utter inability to make a positive, or even probable, anatomic diagnosis of brain tumor; viz., whether we have syphiloma, tuberculoma, glioma or sarcoma.

In conclusion, this case offers an additional example of the well-known fact stated by Oppenheim,[5] Starr,[6] Gowers,[7] and others, that glioma must almost always be considered an inoperable tumor, because of its tendency to infiltrate and because it is usually deeply situated in the white substance of the brain.

In the same sense G. L. Walton and W. E. Paul[8] are worth quoting. They say:

> The prevailing skepticism among pathologists regarding the operability of gliomata seems well founded. Such tumors involve a tendency to faulty growth inherent in the brain substance itself, a tendency to which no boundary can be set, and which can no more be checked than the tendency of fruit to decay after removing the portion obviously decayed, a comparison already rather too favorable for the brain, because the difficulty in determining the extent of brain destruction in case of a glioma by exploratory operation is, as a rule, much greater than that of determining the limit of decay in the fruit.

100 State Street.

THE MANAGEMENT OF TYPHOID FEVER.*

J. F. JENKINS. M.D.

TECUMSEH, MICH.

As soon as a diagnosis of typhoid fever is made, or even in a suspicious case, it is better to place the patient in a recumbent posture, and to keep him in that position throughout the whole course of the disease.

Positive orders must be given to the nurse to change the position of the patient from side to side, or from the back to the side, every two or three hours. One should examine the heart and lungs, as well as the abdomen, from day to day, as long as the patient is under observation, and he should not assume the erect position at any time during the continuation of the fever, either for the purpose of taking nourishment or drink; and, however obstinate the patient may be, one should insist on his using the bed-pan on all occasions when it is necessary.

It is a well-known fact that the diet in typhoid fever is of the utmost importance, and that solid food should not be permitted under any circumstances from the beginning of the fever until ten days after its termination. It is well known that beef tea and broths make an excellent culture medium for the typhoid bacillus, and therefore it is well to omit them from the diet list. This error in diet doubtless accounts for the excessive diarrhea often observed in patients who are allowed to have these broths. Milk, from a quart to a quart and a half, preferably given with pepsin and hydrochloric acid, and two soft-boiled eggs every twenty-four hours, make a very efficient diet during the whole course of the fever. Frequently, barley water or rice water may be given for a change. In the later stages of typhoid fever, a stimulant in the form of old whiskey may be added to the milk, especially if there is a flagging pulse. In the early stage of typhoid fever, fractional doses of calomel, followed by a small dose of Rochelle salts or soda phosphate, is indicated; in many cases the above preparations may be repeated from time to time during the first and second weeks.

The gate of entrance of the typhoid bacillus is the alimentary canal, and Peyers glands, situated in the small intestines, appear to suffer from their attack more than any other portion. Intestinal antiseptics are prescribed by many physicians, but they do not destroy the typhoid bacillus in the intestinal canal, or in the circulatory system, which they frequently invade even before one has had an opportunity of examining the patient. Bacteriologists state, however, that antiseptics do destroy the non-specific bacteria that invest the intestinal canal, combat fermentation to a certain degree and lessen the foul odor emanating from the discharges of the intestinal canal. By their antiseptic influence they lessen the diarrhea, as well as the tympanitis; therefore, they are useful and should be prescribed.

Among the many remedies exerting an antiseptic influence in the alimentary canal, one may mention salol, turpentine, sulphocarbolate of zinc and acetozone.

The temperature in typhoid fever rises from 100 F. to 105 F., and upward. When the temperature of the patient continues up to 102.5, antipyretic remedies are indicated. We have in cold water a remedy that fulfills every indication, either in the form of the sponge bath, the cold pack or tubbing. The cold sponge bath will reduce the temperature, although it may be necessary to repeat the bath every hour or two; occasionally, ice cold water is required to reduce the temperature. Cold drives the blood to the internal organs; hence it is advisable to follow up the bath by vigorously rubbing the surface with a coarse linen or crash towel. Frequently a small quantity of stimulants is indicated after the bath. When delirium, restlessness or coma is a prominent feature, the ice cap continuously applied to the head—although it will be necessary to change its position from time to time—will greatly relieve the patient and often produce a natural sleep. During convalescence a tepid sponge bath of equal parts of alcohol and water two or three times a day has a beneficial effect on the patient. One should insist on the nurse giving the patient from a quart to a quart and a half of boiled water every twenty-four hours, for the typhoid patient does not usually call for water, even when his temperature is high.

In a large proportion of cases diarrhea is excessive; frequently it is aggravated by an excessive quantity of food, or by food which is not assimilated. A change in the quantity and quality of the food will have much to do in lessening the diarrhea. Bismuth subnitrate in large doses frequently repeated will usually check the

1. Sherrington and Gruenbaum: Proc. Royal Soc., vol. lxix.
2. A. W. Campbell: Liverpool Medico-Chirurgical Journal, 1903, p. 430.
3. Jos. Shaw Bolton: Brain, 1903, p. 215.
4. Krause: Deutsche Klinik, vol. viii, article on "Gehirnchirurgie."
5. Oppenheim "Gehirngeschwülste," second edition.
6. Starr: Organic Nervous Diseases.
7. Gowers: Manual on Nervous Diseases.
8. G. L. Walton and W. E. Paul: Journal of Nervous and Mental Diseases, August, 1905.

* Read before the Lenawee County Medical Society, at Tecumseh, Mich., Oct. 10, 1905.

excessive discharge from the bowels. Subsultus tendinum in the terminal stage of the disease is usually accompanied with great restlessness; for which in recent cases I have found Hoffman's anodyne, as recommended by Hare, a very useful remedy.

In the later stage of typhoid fever, the feeble heart's action calls for support; and one must instruct the nurse relative to the necessary stimulants to sustain the circulation. During convalescence the urine is loaded with the typhoid bacillus. Hexamethylenamin in 5-grain doses, repeated three times a day, well diluted with water, and continued for a week or ten days, will destroy the bacillus in the urine.

Special Article

THE PHYSICIAN AND THE PHARMACOPEIA.

CHAPTER II.

EXPECTORANTS.

The prevalence of coughs and "colds" in the winter months is sufficient evidence of the importance of this class of agents. Their use in domestic practice—largely as "patent medicines," so called—probably exceeds that directed by the physician as ten to one.

Physicians are supplied liberally with literature by manufacturers of proprietary remedies, but the pharmacology of this literature is not always worthy of the faith that some physicians place in it. As an example we quote from a circular distributed exclusively to physicians: "In severe and frequent cough, when little mucus is secreted, as shown by the scanty viscal sputum, morphin, or, better, its derivative, ethyl-morphin, is indicated, which increases secretion and lowers excitability of the respiratory center." For comparison with this interested statement by the manufacturers we quote from the article on opium in Wood's Therapeutics (11th ed., p. 716): "Its tendency to check secretion forbids its use, however, in a very large proportion of cases, notably in those in which there is persistent dryness of the bronchial mucous membrane." Sollmann, Cushny and others state that morphin possesses the same property, though to a lesser degree than opium.

In such circulars manufacturers usually advocate the use of some certain remedy for all coughs, but we may be pardoned if we again quote Wood for comparison: "It is plain that the medical practitioner must study in each individual case the relations between tne cough and the amount of work required."

The discovery of a medicinal agent is the signal for a host of imitators whose product may differ, if at all, merely in the substitution of an ethyl for a methyl group, or of one harmless acid radical for another. These are presented in increasing numbers to the physician, who can by no possibility remember them all. Or some well-known drug, whose length of service, if not merit, entitles it to some respect, is seized on to serve as a basis for fabulous claims, perhaps long since voiced, disproved and forgotten.

There is still another interesting phase connected with these various nostrums. Many of us pride ourselves on the fact that we use only "ethical" preparations and also that we insist on knowing just what we are prescribing or using. It must be rather embarrassing, therefore, to find that even the public is more exacting in this respect than we are and that the manufacturers of popular medicines, when they do advertise the composition of their particular mixture, publish a full and complete formula and not an incomplete one such as we frequently find in the advertising pages of medical journals, or in the circulars that come to our desk.

Ayer's Cherry Pectoral Versus Pruni-Heroin.

Concrete examples, however, are so much more effective than mere generalities that we select—almost at random—two advertisements for comparison. Surely no physician of our day would prescribe "Ayer's Cherry Pectoral." How many prescribe the much-vaunted "Pruni-Heroin?" Let us compare these formulas, the one from the lay press, the other from nearly any medical journal. Note that the advantage of complete publicity lies with Ayer; whether correctly or not, the quantities are all given.

AYER'S CHERRY PECTORAL.	PRUNI-HEROIN.
Each fluid ounce[1] represents	Each fluid ounce represents
Wild cherry .....6 grains.	Wild cherry bark.
White pine .....4 grains.	White pine bark.
Terpin hydrate....4 grains.	Terpin hydrate.....4 grains.
Blood root .....2 grains.	Blood root.
Heroin (?).....1/6 grain.	Heroin .....1/6 grain.
Grindelia robusta..4 grains.	Ammon muriate...16 grains.
Senega .....4 grains.	Spikenard.
Rio Ipecac .....2 grains.	Glycerin.
Glycerin.	Solvents.
Alcohol .....80 m.	etc.
Syrup.	
Water.	

If Ayer's "shotgun" Pectoral ought to be considered obsolete, what shall we say of Pruni-Heroin? If a physician prescribe Pruni-Heroin and condemn Ayer's to a patient who has taken Ayer's, what will the patient think of the advice if he learns the composition of Pruni-Heroin?

Expectorants in the Pharmocopeia.

The expectorants official in the United States Pharmacopeia afford a great variety of choice. Innumerable combinations are possible, but we shall merely suggest a few of these, in connection with some of the drugs and preparations available.

It should be remembered that coughing serves to remove mucus from the respiratory tract and usually requires no treatment. If this becomes unduly severe, it may require alleviation; if the secretion is scanty it may be increased or rendered more liquid.

Acute bronchitis may be divided into two general stages, with certain expectorants useful in each stage, but this is not to be taken as a rigid classification.

The first stage—that of dryness of the mucous membrane, with considerable cough—calls for sedatives; the second—that of free secretion—requires stimulant expectorants.

SEDATIVE EXPECTORANTS.

Among the official sedative expectorants to be used in the first, or dry, stage of cough we have the following:

Ipecac.

IPECACUANHA.—U. S.—Ipecac is the dried root of *Cephaëlis ipecacuanha* (Brotero), A. Richard (Fam. *Rubiaceæ*). It is known commercially as Rio, Brazilian or Para Ipecac, or the corresponding portion of *C. acuminata*, Karsten, known commercially as Carthagena Ipecac, yielding, when assayed by the process given in the Pharmacopeia, not less than 2 per cent. of ipecac alkaloids. Ipecacuanha was first described by Piso and Markgraf, in 1648, in their natural history of Brazil. The drug appears to have been well known to the natives of Brazil and to have been much prized for a variety of therapeutic purposes. It was introduced into Europe, about 1675, by John Helvetius, of Paris. The Carthagena variety of Ipecacuanha is a comparatively recent introduction, being first noted as a distinct variety, about 1870. Ipecacuanha is official in all pharmacopeias, but up to the present time the Pharmacopeia of the United States is the only one to recognize the Carthagena variety as being the equal of the Brazilian.

PULVIS IPECACUANHA.—U. S.—Average dose: Expectorant, 0.050 gm. (1 grain); emetic, 1 gm. (15 grains).

FLUIDEXTRACTUM IPECACUANHÆ.—U. S.—Fluid extract of Ipecac.—Extractum Ipecacuanhæ Liquidum Br. should contain 1.75 per cent. of alkaloids.

Average Dose: Emetic, 1 c.c. (15 minims); expectorant, 0.05 c.c. (1 minim).

PULVIS IPECACUANHA ET OPII.—U. S.—Powder of Ipecac and Opium. (Dover's powder.) This contains 10 per cent. of ipecac, 10 per cent. of powdered opium and 80 per cent. of sugar of milk.

Average Dose: 0.500 gm. (7½ grains); used chiefly as a diaphoretic.

SYRUPUS IPECACUANHÆ.—U. S.—Syrup of Ipecac. This contains 7 per cent. of Fluidextract of Ipecac and 1 per cent. of Acetic acid in a mixture of glycerin, sugar and water.

Average Dose: Expectorant, 1 c.c. (15 minims); emetic, 15 c.c. (4 fluidrachms).

VINUM IPECACUANHÆ.—U. S.—Wine of Ipecac. A mixture of 10 per cent. of Fluidextract of Ipecac, 10 per cent. of alcohol and 80 per cent. of white wine.

Average Dose: 1 c.c. (15 minims).

1. We give ounces instead of drams to facilitate comparisons.

When the bronchi are inflamed and the secretion is scanty or thick and tenacious, nauseants, such as ipecac, lead to increased secretion which secures its removal by coughing. The choice of nauseants is guided by the general condition of the patient, ipecac being preferred to Antimony and Potassium Tartrate in those cases (children and weakly persons) in which great depression would be dangerous. The active principle of ipecac is not usually employed in the pure state as an expectorant, the syrup of ipecac being preferred, as the tannin present retards absorption and prolongs the action.

The expectorant dose of the nauseants is always very much less than the emetic—approximately one-tenth in the case of ipecac. The average doses given are approximate and the expectorant dose is to be repeated every two or three hours; the emetic dose is to be repeated half-hourly until effective.

For croup in small children few remedies enjoy a greater reputation than syrup of ipecac, which is given alone in doses of from ten to thirty drops, repeated at intervals of thirty minutes until vomiting occurs.

A Typical Ipecac Prescription.

The preparations of ipecac are seldom used alone as expectorants, but are usually added to mixtures of allied use.

The following may be considered a typical prescription for ipecac to be used in teaspoonful doses every two hours; for the syrup of ipecac a corresponding amount of fluidextract or wine may be substituted. When an opiate is imperatively demanded 15 c.c. (4 drachms) of camphorated tincture of opium may be added without other change:

℞.	Syrupi ipecacuanhæ	℥vi	25
	Ammonii chlorid	ʒiss	6
	Syrupi tolutani, q. s. ad	℥iii	100

Senega.

SENEGA.—U. S.—Root of *Polygala senega*—Radix Senega—is one of the few drugs of American origin that has found a place in every recent pharmacopeia. It contains a saponin which is locally irritant, but which is not absorbed; hence, the drug is not depressing. It is almost invariably used in small amount as an addition to other expectorants. It has the disadvantage of an unpleasant acrid taste. The official preparations are:

FLUIDEXTRACTUM SENEGÆ.—U. S.—Average dose, 1 c.c. (15 minims), and

SYRUPUS SENEGÆ.—U. S.—This contains 20 c.c. Fluidextract of Senega in 100 c.c.

Average Dose: 4 c.c. (1 fluidrachm).

See also Syrupus Scillæ Compositus.

Sanguinaria.

Another irritant nauseant more notable for its abuse than use is:

SANGUINARIA.—U. S.—Rhizome of *Sanguinaria canadensis* (bloodroot). This drug, usually omitted by modern therapeutists or dismissed with a line, contains sanguinarin, belonging to the morphin group, and causing depression of the respiratory center. It is mentioned here more particularly because of its widespread use by the nostrum makers. The common name—bloodroot—appears to possess considerable psychical effect. The Indians, perhaps, displayed more wisdom in its use than we do; they only applied it externally, as war paint. The only official preparation is:

FLUIDEXTRACTUM SANGUINARIÆ.—U. S.

Average Dose: 0.1 c.c. (1½ minims).

The "Compound Syrup of White Pine" of the national formulary represents the "popular" expectorants. It is not recommended, however, as it is too complicated.[1]

1. The following is the formula for the Compound Syrup of White Pine:

White pine bark (pinus strobus)	℥iiss	75	
Wild cherry bark	℥iiss	75	
Spikenard root	℥iiss	10	
Balm of Gilead buds	℥iiss	10	
Sanguinaria root	℥ii	8	
Sassafras bark	grs. cv	7	
Morphin sulphate	grs. viiss		5
Chloroform	℥iss	6	
Sugar	℥xxvss	750	
Alcohol			
Water			
Syrup (U. S.), of each, to make	Oii	1000	

Antimony.

Antimony and potassium tartrate is a more depressing nauseant than the drugs above mentioned. It may be used on robust persons, but not with safety on children or the infirm. Its mode of action is similar to that of ipecac, and here, too, we have a variety of official preparations.

ANTIMONII ET POTASSII TARTRAS.—U. S.—Antimony and Potassium Tartrate; Antimonium Tartaratum Br., Tartarus Stibiatus Ger., Tartar Emetic. Colorless, transparent crystals or a white granular powder, soluble in 15.5 parts of water, insoluble in alcohol. It was discovered in 1631 by Mynsicht, whose process of manufacture was subsequently improved by Glauber. It has long been the most popular and widely used of the medicinal compounds of antimony, and is now official in all recent pharmacopeias, the official nomenclature differing widely, however.

Average Dose: Expectorant, 0.005 gm. (1/10 grain); emetic, 0.03 gm. (½ grain).

VINUM ANTIMONII.—U. S.—Wine of Antimony. This contains 0.4 per cent. of Antimony and Potassium Tartrate in solution in 1 part of alcohol and 5 parts of white wine, and enters the well-known compound mixture of glycyrrhiza—a deservedly popular expectorant.

Average Dose: 1 c.c. of the wine (15 minims).

MISTURA GLYCYRRHIZÆ COMPOSITA.—U. S.—See Glycyrrhiza.

Tartar Emetic is an ingredient (0.2 per cent.) in the Compound Syrup of Squill, which see below.

For the administration of Antimony and Potassium Tartrate, the official Compound Mixture of Glycyrrhiza (6 per cent. Wine of Antimony, —0.024 per cent. Antimony and Potassium Tartrate) is used alone or with 4 gms. (60 grains) Ammonium Chlorid to 60 c.c. (2 ounces). A typical prescription follows:

℞.	Vini antimonii	℥iv	15
	Aquæ chloroformi, q. s. ad	℥iii	100

A teaspoonful every two hours.

Apomorphin.

APOMORPHINÆ HYDROCHLORIDUM.—U. S.—Apomorphin hydrochlorid.—The hydrochlorid of an alkaloid prepared from morphin by the abstraction of one molecule of water. Soluble in 40 parts of water, in the same proportion of alcohol, practically insoluble in all other solvents.

Apomorphin is much less useful as an expectorant than as an emetic, its action being brief.

Average Dose: Expectorant, 0.002 gm. (2 mg. or 1/30 grain); emetic, 0.005 gm. (5 mg. or 1/12 grain).

Ammonia.

AMMONII CHLORIDUM.—U. S.—Ammonium Chlorid Br. Ammonium chloratum Ger. A white crystalline powder, without odor, having a cooling saline taste, permanent in air, soluble in 2 parts of water and in 50 parts of alcohol.

As sal ammoniac, this substance has been known from a very early time. It is popularly supposed to have been first obtained from the neighborhood of the Temple of Jupiter Ammon, in Northern Africa.

Ammonium Chlorid was known to the Arabian physicians and was described by Geber. It is now official in all recent pharmacopeias. Wood recommends this salt in the stage just before secretion becomes free; for this purpose the following may be used:

TROCHISCI AMMONII CHLORIDI.—U. S.—Each troche contains 0.1 gm. (1½ grains) Ammonium Chlorid and 0.2 gm. (3 grains) Extract of Glycyrrhiza.

Ammonium chlorid is much used as an addition to Compound Mixture of Glycyrrhiza in the proportion of 4 gms. (60 grains) to 60 c.c. (2 ounces), and it may be added to nearly any expectorant mixture which is not strongly alcoholic.

STIMULATING EXPECTORANTS.

Tolu.

BALSAMUM TOLUTANUM.—U. S.—Br.-Ger.—Balsam of Tolu, a balsam obtained from *Toluifera balsamum*, a yellowish-brown, plastic solid that has a pleasant aromatic odor and a mild aromatic taste. It is readily soluble in alcohol, nearly

insoluble in water. Balsam of Tolu was first described by Monardes, a Spanish physician, about 1574. The drug, it is said, was collected in a district near Carthagena, called Tolu, and appears to have been well known to and used by the natives of Northern South America. Balsam of Tolu, at the present time, is a widely used and popular drug and is official in all of the leading pharmacopeias.

Average Dose: 1 gm. (15 grains).

SYRUPUS TOLUTANUS.—U. S.—Syrup of Tolu, containing the water-soluble principles of 5 per cent. of Tincture of Tolu in Syrup.

Average Dose: 15 c.c. (4 fluidrachms).

TINCTURA TOLUTANÆ.—U. S.—Tincture of Tolu, a 20 per cent. solution of Tolu in alcohol.

Average Dose: 2 c.c. (30 minims).

The mildest of the stimulant expectorants is Syrup of Tolu, if, indeed, this can be considered as anything more than a flavored syrup. The balsam is not infrequently used in medicine, but may be given in the form of an emulsion made with acacia and water and sweetened with sugar.

The benzoic acid and volatile oil in the balsam give it the advantage of being mildly antiseptic, the syrup, however, being too weak to be effective in the dose usually employed.

BALSAMUM PERUVIANUM.—U. S.—Balsam of Peru may be used in the same dose and for the same purpose as Balsam of Tolu.

Attention is called to the fact that the urine of persons taking such amounts of these balsams gives a precipitate with nitric acid which may be mistaken for albumin, but the precipitated resins dissolve in alcohol, while albumin does not.

Benzoin.

BENZOIN.—U. S.—This balsamic resin is also a harmless stimulant, useful in bronchial irritation.

TINCTURA BENZOINI.—U. S.—A 20 per cent. solution of Benzoin in alcohol, or:

TINCTURA BENZOINI COMPOSITA.—U. S.—"Turlington's Balsam," commonly called "Friar's Balsam" (also containing Benzoin, Aloes, Storax and Tolu), also may be given.

Average Dose: 1 c.c. (15 minims) every two hours.

The fact that these expectorants are harmless is a very great advantage—and is a point to be particularly remembered in the treatment of small children, in whom opiates and such depressants as antimony and potassium tartrate are to be avoided.

Tar.

SYRUPUS PICIS LIQUIDA.—U. S.—Syrup of Tar.—Containing one-half of 1 per cent. of the soluble principles of tar in syrup, is mildly stimulant and the taste is not unpleasant.

Average Dose: 4 c.c. (1 fluidrachm).

Tar itself has a disagreeable acrid taste and is not often used in substance.

Terpin Hydrate.

TERPINI HYDRAS.—U. S.—Terpin Hydrate.—This is a body closely related to turpentine, camphor, etc. It occurs in colorless, lustrous, rhombic prisms, or a white crystalline powder, nearly odorless, of a slightly aromatic and somewhat bitter taste, soluble in about 200 parts of water and in 10 parts of alcohol.

Average Dose: 0.1 gm. (2 grains) in capsules or elixir. Owing to its slight solubility in water, the elixir must be strongly alcoholic and glycerin be substituted for syrup—a serious objection to its general use. It is very commonly associated with codein, which is also not to be recommended for routine practice.[2]

Terpin Hydrate has been known for some time, but was not used in medicine until after Lepine published the results of his physiologic investigations in 1885. It is supposed to possess the antiseptic and stimulating effects of turpentine without possessing its irritating properties. The substance soon became popular and was included in the United States Pharmacopeia for 1890. It is also official in the German Pharmacopeia and in the French Codex.

It has been suggested as a remedy in a variety of ailments, but it appears to be useful mainly as an expectorant, enjoying a reputation particularly among the nostrum vendors. It is, in reality, useful in aiding to get rid of secretion from the bronchial mucous membrane.

Terebene.

TEREBENUM.—U. S.—Terebene.—This is a polymerization product derived from turpentine which it closely resembles.

It is a colorless liquid, having a rather agreeable odor and an aromatic, somewhat terebinthinate taste, readily soluble in 3 times its volume of alcohol, but only slightly soluble in water.

First obtained by Soubeiran and Capitaine about 1841, it was introduced into medicine by Dr. William Murrell about 1885; it was made official in 1890 and in the British Pharmacopeia of 1898.

It is used in much the same conditions as Terpin Hydrate; its immiscibility with the mixtures usually employed as expectorants has interfered in no small way with its employment. It may be prescribed in alcoholic solution, in capsules or in the form of an emulsion.

Average Dose: 0.5 c.c. (8 minims).

Squill.

SCILLA.—U. S.—Squill. The bulb of *Urginea maritrima*, containing several potent principles, it is exceedingly irritant and in large doses toxic.

Average Dose: 0.1 gm. (2 grains).

Of all the official drugs used in the treatment of cough, few are better known than squill, the syrup being the most popular of its preparations.

This drug is both stimulant and nauseant; hence, it is used in both stages of bronchitis.

SYRUPUS SCILLÆ.—U. S.—Syrup of Squill. This represents 5 per cent. of Squill; made from Vinegar of Squill and, therefore, containing dilute Acetic Acid; it is, of course, incompatible with ammonium and other carbonates—a fact not infrequently lost sight of by the prescriber.

ACETUM SCILLÆ.—U. S.—Vinegar of Squill. This represents 10 per cent. of the drug extracted with dilute acetic acid.

Average Dose: 1 c.c. (15 minims).

FLUIDEXTRACTUM SCILLÆ.—U. S.—Average dose, 0.1 c.c. (2 minims).

TINCTURA SCILLÆ.—U. S.—This represents 10 per cent. of the drug.

Average Dose: 1 c.c. (15 minims).

These last three preparations of squill are seldom employed, but the following is widely used:

SYRUPUS SCILLÆ COMPOSITUS.—U. S.—Compound Syrup of Squill, Hive Syrup. This represents 8 per cent. of the Fluidextracts of Squill and Senega and 0.2 per cent. of Antimony and Potassium Tartrate or about 0.01 gm. (⅛ grain) to the teaspoonful.

Average Dose: 2 c.c. (30 minims).

The use of squill as an emetic is not free from danger and the drug is seldom so employed alone.

CREOSOTE.—U. S.—(or Guaiacol.—U. S., which constitutes up to 90 per cent. of creosote) is used as a stimulant expectorant. There is considerable diversity of opinion as to its mode of action. It seems to possess little germicidal action so far as the lungs are concerned. When it is administered in a bland oil very large doses are tolerated, but this is not necessary for its expectorant effect.

Numerous compounds of creosote and of guaiacol have been suggested as substitutes for the official products, but it is not probable that they possess any decided advantages over the official. Those which are less poisonous are probably absorbed from the alimentary canal to a much less degree than are the official creosote and guaiacol.

Among the guaiacol compounds is the proprietary "Ethacol," containing ethyl-morphin, a fact to be carefully borne in mind, as the name of the preparation is not nearly so suggestive of morphin as of guaiacol. The manufacturers of this article recommend morphin or ethyl-morphin in bronchitis for increasing secretion! to which attention has already been called.

2. It may be prescribed as the unofficial Elixir of Terpin Hydrate and Codein Sulphate. Dose: Two teaspoonfuls, containing 0.15 gm. (2 grains) Terpin Hydrate and 0.024 gm. (⅓ grain) Codein.

ANODYNES.

When the irritability of the throat causes excessive coughing anodynes are indicated. Morphin, however, must only be used with the greatest caution owing to its tendency to check secretion, "free circular therapy" to the contrary notwithstanding.

Codein.

CODEINA.—U. S.—Codein. Very soluble in alcohol, much less soluble in water.

CODEINÆ PHOSPHAS.—U. S.

CODEINÆ SULPHAS.—U. S.—Both are quite soluble in water, but not in alcohol.

Average Dose: 0.003 gm. (3 mg. 1/20 grain).

Codein, rather than its salts, is suited for combination with Terpin Hydrate, since both require alcohol as its solvent.

CODEIN has come very largely into use in expectorant mixtures in recent years, partly because its action resembles that of morphin without disturbing digestion or causing constipation in moderate doses, partly, no doubt, because manufacturers have popularized it in order to avoid the stigma attaching to the general use of morphin and opium.

Codein undoubtedly lessens cough, but, as already stated, this is not always desirable. Codein phosphate or sulphate, being soluble in water, may be added to almost any cough mixture which is not alkaline.[3]

Ammonium Chlorid is not well suited for combination with Terpin Hydrate, since the latter requires a strongly alcoholic menstruum which precipitates ammonium chlorid.

Numerous substitutes have been introduced for morphin and codein, but it has not been demonstrated that they possess all the advantages and none of the disadvantages of the officials. It must not be forgotten that habit may be formed with any of the morphin derivatives, including codein.

Attention has previously been called to the extreme similarity between Ayer's Cherry Pectoral and Pruni-Heroin, and the reader is invited to compare the extravagant claims made for Glyco-Heroin (Smith) with the action of heroin as stated by Sollmann and other accepted authorities.

Still another of the host of expectorant nostrums is "Syrup Codeia Compound—Bell," said to contain codein phosphate, terpin hydrate, eucalyptus and ipecac (compare with formula of Ayer's Cherry Pectoral).

The manufacturers of the "Syrup Codeia Co.—Bell" lay particular stress on the purity of their codein. The United States Pharmacopeia gives a very simple test for the purity of codein, which any physician may apply. We again invite a careful comparison of the testimony of accepted authorities concerning the constituents of this nostrum with claims made by the manufacturers.

The bromids of ammonium, potassium and sodium are safer than morphin, and are frequently beneficial when anodynes are indicated. Their doses should, however, be more than proportionately reduced for children.

Hydrocyanic Acid.

HYDROCYANIC ACID may be added to expectorant mixtures, but its action is fleeting and it must be frequently repeated.

ACIDUM HYDROCYANICUM DILUTUM.—U. S.—Contains 2 per cent. absolute HCN.

The average dose is 0.1 c.c. (1½minims).

DEMULCENT EXPECTORANTS.

Demulcents are frequently employed to allay the irritation of the mucous membrane, and they possess the great advantage of being harmless. They may be administered in the form of lozenges or troches.

3. The following is suggested as a simple prescription containing codein:

℞. Codeinæ sulph. .....grs. viii |5
Ammonii chloridi .....ʒiss 6|
Syrupi pruni. virg. q. s. ad..... ʒiii 100|
M. Sig.: A teaspoonful every two or three hours.

Compound Mixture of Glycyrrhiza, Syrup of Tar, Syrup of Squill or Syrup of Tolu may be substituted, wholly or in part, for the syrup of Wild Cherry.

The following demulcents may be used as vehicles:
SYRUPUS ACACIÆ.—U. S.
MUCILAGO ACACIÆ.—U.S.

Licorice.

GLYCYRRHIZA.—U. S.—Licorice root is so well known as to require but little comment. Its preparations afford a variety of forms for administering it.

FLUIDEXTRACTUM GLYCYRRHIZÆ.—U. S.—This is the fluidextract of licorice root, from which a satisfactory syrup may be prepared by mixing 25 c.c. of the fluidextract with enough syrup to make 100 c.c.

Average Dose: 2 c.c. (30 minims).

EXTRACTUM GLYCYRRHIZÆ PURUM.—U. S.—This is a semi-solid extract prepared from the root and is well adapted as an addition to extemporaneous mixtures.

Average Dose: 1 gm. (15 grains).

TROCHISCI GLYCYRRHIZÆ *et* OPII.—U. S.—This contains 0.005 gm. (5 mg. or 1/12 grain) of opium.

GLYCYRRHIZINUM AMMONIATUM.—U. S.—Ammoniated Glycyrrhizin is an excellent demulcent; it is readily soluble in water, but is incompatible with acids.

Average Dose: About 0.25 gm. (4 grains).

PULVIS GLYCYRRHIZA COMPOSITA.—U. S.—*Brust Pulver* Gr. Compound Powder of Glycyrrhiza, a laxative, containing Senna, Washed Sulphur, Glycyrrhiza, Sugar and Oil of Fennel, and is popularly believed to be a desirable adjuvant to expectorant medicines.

Average Dose: 4 gm. (60 grains).

MISTURA GLYCYRRHIZÆ COMPOSITA.—U. S.—Compound Mixture of Glycyrrhiza, Brown Mixture, containing Purified Extract of Glycyrrhiza and Acacia, each 3 per cent., syrup 5 per cent., with Camphorated Tincture of Opium 12 per cent., Wine of Antimony 6 per cent. and Spirit of Nitrous Ether 3 per cent.

Average Dose: 8 c.c. (2 fluidrachms).

This is a deservedly popular expectorant. It is very often prescribed alone, but is also much used as a vehicle for other expectorants, particularly ammonium chlorid.

Ammonia.

AMMONIUM CARBONATE.—U. S.—Ammonium Carbonate Br., Ammonium carbonicum Ger.

White, hard, translucent, striated masses of a strong odor of ammonia without empyreuma, and a sharp, saline taste, slowly but completely soluble in about 4 parts of water and decomposed by hot water.

A condition deserving especial mention is that in which the mucus is particularly thick and tenacious, requiring liquefaction; for this purpose, ammonium carbonate is frequently added to other expectorants; it has the disadvantage of an unpleasant taste, which can not be disguised with diluted acids because these decompose the carbonates.

The cough of chronic bronchitis requires the use of one of the stimulant expectorants, such as Terebene or Terpin Hydrate, bearing in mind the avoidance of those which will prove objectionable with continued use.

While urging the advantage of using the pharmacopeial agents, we particularly suggest that the physician consider the several ingredients of any nostrum instead of accepting the absurd and often grotesque claims of the manufacturers.[4]

4. Compare the following, purporting to have been written by a physician, with any text-book treating of the ingredients of which Respiton is alleged to be composed—5 grains, each. Asclepias (species ?) berberis and aromatics to the teaspoonful:

"I have used Respiton in cases of La Grippe and on a a baby, 9 months old, for severe cough, with excellent results. H. E. Williams, M.D."

Constipation in Anemic and Chlorotic Subjects.—Sir Andrew Clarke recommended one-half grain each of aloin, ferri sulphas exsic., ext. belladonnæ, ext. nucis vomicæ, pulv. ipecac, pulv. myrrhæ and soap: One pill one hour before last meal, should bowels not act during the day. Osler uses a sulphur confection in the morning and a pill of iron, rhubarb and aloes throughout day. Shoemaker prescribes: ℞. Aloes purif. gr. iii; massæ ferri carb. gr. ii; pulv. aromat. gr. i: One or two pills at the bed hour. Exercise in the fresh air is, of course, a valuable adjunct.—*Denver Medical Times.*

Clinical Notes

A CASE OF COMPOUND DISLOCATION, WITH FRACTURE OF THE LEFT ULNA.

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After a careful search of the literature I have failed to find a case similar to the one described in this paper, and I am reporting this with the hope that it will be of benefit to other members of the profession.

Patient.—On Dec. 29, 1903, C. H., aged 24, was admitted to the Emergency Hospital of this city.

History.—While ascending a ladder in the afternoon of the same day he had fallen about fifteen feet to the ground below. With some building material in his hand he had ascended about two-thirds of the latter and, turning around, he lost his balance and fell to the ground below. He landed on the palm of his right hand, left wrist, knees and face. The injury to the right palm was of the lacerated variety, which required six sutures to close the wound, after which it was dressed with 10 per cent. iodoform gauze and redressed every day for a week. The sutures were then removed, the wound having healed by first intention. The injuries to the knees and face were simple contusions, the former healed completely under iodoform gauze dressing in about five days; the latter healed, except the slight discoloration, in about ten days under bichlorid and later alcohol compresses. More important than the injuries I have just described, and that which has led me to report this case, was the injury to the left forearm. The man, as I have mentioned above, landed on his left wrist, etc., and as soon as his wrist struck the ground dislocation of the ulna occurred, with the free end of the ulna piercing the muscles, fascia, cutaneous and other tissues, the result being a "compound dislocation." From the history which the patient gave and from the appearance of the wound, I concluded that the end of the ulna, which was protruding through the tissues of the wrist, had struck the ground, thus causing the splintering which had occurred of that end of the ulna. I made a diagnosis of "compound dislocation, with a comminuted fracture" of the left ulna.

Treatment.—The patient arrived at the hospital at 6:30 p. m., and was evidently under the influence of alcohol, which I later learned was given to him by his friends in the hope of relieving his pain. His injuries had been dressed by one of the physicians at the Naval Academy Hospital, after which the patient was removed to the Emergency Hospital. I found the patient a little stupid and suffering a good deal of pain, for which I directed the nurse in charge to administer morphia, gr. ¼, with atropia, gr. 1/150, and to repeat the injection, if necessary, to quiet the patient. After an inspection of the injuries I concluded to wait until it was necessary to redress them and not to interfere with what had already been done. I remained with the patient about two hours; then left him in charge of the nurse for the night. The next morning I called to see patient, and was informed by the nurse in charge that the morphia and atropia had had no effect and that the patient had been suffering all night. On inspecting the dressings I found that they were thoroughly blood stained, and deemed it wise to investigate the cause for so much bleeding. Removal of the dressings from the left forearm showed the splintered end of the ulna protruding through a lacerated wound of the soft parts of the left wrist, which had been sutured with catgut and, I am sorry to say, had not proved adequate for the injury. I removed the loosened sutures and could then clearly see that the distal end of the ulna, which was protruding, was splintered to such an extent as to make it triangular, with an apex, instead of being more or less blunt as is the case in the normal bone, the styloid process being broken off.

Operation and Result.—Under general anesthesia I proceeded to repair the injury. I found it impossible to return the free end of the ulna through the opening made by its exit, so extended the opening up the forearm by an incison about three inches, and then, after catching up and ligating all bleeding vessels, I was able to reduce the dislocation by extension, flexion inward and outward of the hand, and manipulation, my assistants retaining the ulna in position while I closed up the wound with ten interrupted sutures. A plaster of Paris bandage was then applied, an oblong window being left over the wound which was dressed with 10 per cent. iodoform gauze after thorough irrigation with 1 to 1000 bichlorid solution. The injuries to the right palm and knee were also dressed with 10 per cent. iodoform gauze after bichlorid irrigation. The lacerated wound of the right palm required six sutures to close it. Both palm and knee had entirely healed by the sixth day, at which time the sutures were removed from the palm. The injury to the left forearm was dressed every second day, then every third day, until the sutures were removed at the end of four weeks, the wound having healed by third intention. The plaster bandage was removed at the end of three weeks. After massage with alcohol I put up the wrist in an anterior and posterior splint, which I kept on for about ten days. After removal of the splints, passive movements and massage were ordered and gradually increased until the patient was allowed to rotate and to flex his hand as much as possible. The wound healed up entirely, and the patient was discharged at the end of the seventh week with fairly good movement.

SUCCESSFUL AMPUTATION OF THE PENIS FOR EPITHELIOMA.

L. SEXTON, M.D.
NEW ORLEANS.

History.—In June, 1898, Y. C. consulted me about an epithelioma of the penis which he and his physician friends had unsuccessfully tried to heal for eight months. Instead of healing, the epithelioma had continually grown larger until it involved not only all the preputial margin of the penis, but the larger portion of the glands as well.

Examination.—It was the squamous variety of epithelioma which had started as a warty excrescence on the folds of the prepuce. Hypertrophied papillæ studded the ulcer where the mucous membrane and skin had previously come together. Several scabs or layers of epithelium had been removed from time to time when finally the base of the growth gradually began to harden and to extend, its surface being covered with a cauliflower-like excrescence. The portions of the tumor that had ulcerated had everted edges which bled freely on manipulation. The granulations were red like a cock's comb—even the friction of the clothing or the removal of bandages was sufficient to start up a slight hemorrhage. Fortunately, the process of infection had not reached the inguinal lymphatic glands as on careful examination they were found to be neither enlarged nor tender, so it was not necessary to remove them. The fact that I had seen several epitheliomata in old people caused me to look with grave suspicion on any warty growth of the penis, even though the patient was a young man—45 years of age, as in this instance.

Diagnosis.—Though the diagnosis was self-evident, the base of the tumor hardened, and the history one of an epitheliomatous growth, the base and every indication pointing to the diagnosis of skin cancer, still I would not amputate such an important organ without first excluding every possibility of doubt of syphilitic gummata or simple papillomata. I therefore excised a small portion of the tumor and had the diagnosis of epithelioma verified by a competent microscopist. Had I not known that the patient had never been infected with syphilis, I should have tried him for a short while on large doses of iodid of potash and mercury. Chancroid is usually a more acute affection than epithelioma, is amenable to proper treatment and, as a rule, occurs in younger men. Buboes and secondary symptoms develop in the early course of syphilitic chancre, and induration is much larger in comparison to the size of the ulcer than in epithelioma. In chancre in from six to eight weeks there is a roseolous rash. In syphilitic gummata the growth is much more rapid and the ulceration after it develops is not so likely to bleed. Its edges are more undermined, its granulations not so fungous. Epithelioma, as remarked before, is usually a disease of middle or old age. It is

a chronic ulcer with indurated edges and no disposition to heal, and glandular enlargement comes late in the course of the disease. All these diagnostic points should be taken into consideration, as was done in this case, before a final amputation is made. A competent microscopist can settle the question by a careful examination of a section of the tumor.

Treatment.—As the prognosis of the disease is always grave, I told the patient after the diagnosis had been made positively that the disease would progress from bad to worse and that there was no hope for recovery from local or constitutional treatment, and that his only chance would be immediate removal of the organ. He had heard the siren tale of all the quacks; in fact, he had tested some of their wares at enormous expense and pain to himself, only to see the disease progress with more rapidity than before; hence he was reconciled to radical and rational treatment, and when I assured him that the element of pain would not enter into the case at all he readily consented to an amputation of the organ, which was done in the following manner:

Operation: The pubis and scrotum were shaved and thoroughly cleansed with soap, water and the usual antiseptics. The mechanical cleansing had been done previously. The head of the organ was thoroughly hooded so as to prevent the possibility from infection from the ulcer during the operative proceedings. A strong rubber band was rendered aseptic, doubled on itself, and thrown around the penis, close to the symphysis pubis. The penis was firmly held, though not stretched, and after a cuff of healthy skin had been dissected back the cut was made through the corpora cavernosa about two inches proximal to any evidence of the diseased tissue and a beveled incision made which left the urethral portion one inch longer than the corpora; the diseased portion was thus ablated. At this point the rubber band was loosened and four small vessels were either twisted or ligated with catgut. The urethra was split up for a small distance and its edges stitched to the skin, which had previously been approximated over the amputated stump of the penis. A soft rubber catheter was left in the bladder in order that the wound might not become infected by the urine passing over it. A light sterilized gauze dressing and T bandage were applied to the perineum. The parts were occasionally washed off with boracic acid or carbolic acid solution.

Result.—An uninterrupted recovery was the result and no recurrence of the trouble has appeared, though seven years have elapsed since the operation was performed.

Remarks.—In neglected cases in which the disease has progressed even to the roots of the penis and in which the inguinal glands are enlarged, it becomes necessary to enucleate the glands from the groin as well as to amputate the penis from the symphysis pubis; as a matter of course this is a much more serious operation and the liability to recurrence is much more probable. Castration of the patient at the time this amputation is done has been advocated by some surgeons, but as the operation is required at an age in which sexual passion rarely enters into the case, it occurs to me that the testicles may be left unless they too are involved in the diseased process.

INTESTINAL PARASITES IN CANAL ZONE.

ONE HUNDRED AND FIFTY CONSECUTIVE EXAMINATIONS OF STOOLS.

NORMAN E. WILLIAMSON, M.D.
Pathologist, Colon Hospital.
CANAL ZONE.

Balantidium coli, or *Paramœcium coli,* has not hitherto been reported from this section. It occurred in two cases of our short series. It has also twice been seen by Dr. E. P. Beverley, and in one case by Dr. Lloyd Noland, at Ancon Hospital—five cases in all.

It is oval or pear-shaped, at times round; from 70 to 110 microns in length by from 60 microns to 72 microns in width. It is actively motile, being covered with flagellæ most numerous at the mouth, which is at the small pole. There are a rather large nucleus and two contractile vacuoles.

INTESTINAL PARASITES FOUND IN 150 CONSECUTIVE EXAMINATIONS OF STOOLS.

	Ova of Uncinaria Duodenala.	Ova of Trichocephalus Dispar.	Ova of Ascaris Lumbricoides.	Ameba Dysenteriæ.	Rhabdonema Strongyloides.	Cercomonas Intestinalis	Balantidium Coli.	Myiasis.	Trichina Spiralis.	Negative.
48										+
18	+									
10				+						
1				+		+				
8		+	+							
1		+				+				
11	+	+								
1	+	+				+				
4					+					
2								+		
4	+		+							
13		+								
5						+				
2		+			+					
1	+	+					+			
3	+	+	+							
1		+	+		+					
1			+	+						
3	+		+	+						
1			+			+				
1	+	+	+		+	+				
1	+		+		+					
2	+	+	+	+						
1			+							
1			+		+					
1									+	
3		+		+						
1			+				+			
1	+	+		+						
150	46	48	25	21	10	10	2	2	1	48

A monograph of reported cases has recently been written by R. P. Strong.[1] Access to more recent literature is not available here.

The two cases seen here were complicated by other infections. Both patients, however, had diarrhea, which could be attributed to the balantidium, which was found in great numbers in both cases.

Worthy of note also is the relative frequency of *Rhabdenema strongyloides.* The small, yellow, slowly motile ameba, which I have frequently seen in the Philippines, and which is usually considered non-pathogenic, has not been seen in this series of cases.

A CHRISTMAS STORY.

E. S. McKEE, M.D.
CINCINNATI.

About eighteen years ago I was called to see a patient, a recent arrival from Russia, whom we will call Mrs. Blankstein. She was very ill, indeed, and I found it necessary to see her every day for a month, commencing December 15. She recovered, and in due time I sent my bill. In somewhat overdue time her husband came to my office to pay it. The following was his plea: "Mr. Doctor: dat bill you zendt mein vife, he's all dright, but vone dem visits you make mein vife you makes him on a Grisdmas day, and I vandt you make me a bresent dat visit you makes mein vife ond Grisdmas day." The request was so original, coming from the source it did, so different from the usual demand of a per cent. off, that I threw off the visit, made him a "bresent" of it, instead of charging him double as I felt like doing for being taken away from my Christmas turkey.

I have had many times the worth of the presented visit telling it to my friends. Almost every Christmas since this occurrence I have been called to some sufferer, poor in this world's goods, and before leaving I have told the story of the Christmas present of a visit and made the patient a present of the Christmas visit I was then making. The happy smile, the brightened eye of the pale patient has been my reward for working when the rest of Christianity was feasting.

1. Bulletin No. 26, Bureau of Government Laboratories, Manila.

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ACCIDENTS AND THE DUTY OF THE STATE.

We all have a hazy understanding that there are too many industrial and other accidents in this country. We realize indistinctly and shudder sympathetically over those appalling federal statistics as to railroad accidents which have convicted us before all Europe of reckless disregard of human life. Indeed, we seem to accept the accident column as a natural accompaniment of our breakfast. It is a permanent feature of the daily papers, though its proportions tend to shrink as the material monotonously increases, so that the death of an obscure person by street-car accident is now not worth more than an inch of type. Yet, in fact, we are all curiously ignorant as to the actual extent and portent of accidents. We have no knowledge of the numbers of non-fatal accidents nor of the disability which results from them, and our only trustworthy figures as to fatal accidents are those concerning railroad accidents and to some uncertain extent accidents in mines. We do know from German statistics that the greatest burden of accidents is borne by certain classes of manual workers: such occupations as those of diggers, teamsters, sailors, miners—occupations in which the man must depend on his own personal strength—are those showing the heaviest proportion of disabling accidents. Recent statistics[1] only confirm the observation of those familiar with the accident wards of our great hospitals. Their occupants belong on the whole to the humblest ranks of the industrial army, and death or disabling injury means in their case usually the reduction of themselves and their families to pauperism. Physicians who have served in such wards will recall many instances of patients technically cured, yet evidently incapable of returning to their former work. The subsequent history of such cases, the long-delayed convalescence, the resulting dependency and even pauperism have never been reckoned up, yet it is the public which must bear the expense of the patient through his hospital treatment and the public which, in many cases, must support him and his family after he leaves the hospital.

Whether it could ever be considered the function of a public hospital to inquire into the nature and causes of the accident cases in its wards is, of course, open to question; yet there can hardly be a question but that the public which pays for the costly hospital service, and in many cases for the maintenance of the family, may properly ascertain through some agency where the responsibility for a given accident actually rests. At present, this work of investigation and of fixing responsibility is not only ignored by the public, but because of public neglect the whole matter has fallen into the hands of exploiters on every side. First, there are the great corporations which maintain private hospitals and impregnable secrecy. Second, there are the employers' insurance associations, which secure the individual employers against the third element, "the personal inquiry lawyer" and his indispensable colleague, the "ambulance shark."

The employer does indeed seem forced to use this expedient of insurance, which relieves him of the costly annoyance of defending suits reasonable and unreasonable, but which at the same time cuts him off from the friendly sense of responsibility for men injured in his service—a responsibility he would naturally both feel and express. The workman, on the other hand, by means of this employers' insurance, is prevented from dealing with his employer directly, and as he has no money with which to pay lawyers', physicians' or court fees, he is driven to practitioners who will accept his case on shares. The patient is really the victim at every point of circumstances over which he can never hope to exercise control. He bears the penalty of the law's delays and sets his puny strength against that of highly organized business enterprises. If after years of waiting he obtains adequate damages, he must content himself with but the share of the monkey in the old fable.

The governmental insurance of Germany shows the first successful effort to bring some sort of order out of this chaos. It has been now a matter of twenty years' experimentation there, and the results are worthy of study. We have not space to give more than the merest outline of the system now in operation in Germany, and already extensively imitated in Austria and other countries. There are already three forms of compulsory insurance established, against sickness, accident and old age. The insurance funds against sickness are contributed one-third by the employers and two-thirds by the employes, accident insurance is a charge against employers only, while the old age or disabilities indemnity is made up of about equal contributions from the employers and the employes, supplemented by a small fixed contribution by the government. These various funds are managed under strict governmental supervision at an astonishingly small expense. The administration charge is stated as less than 8.5 per cent. Embezzlement and misappropriation are unknown. The annual receipts are more than $130,000,000, and 17,000,000 work men and women are contributing to and receiving these funds. It is, however, to the accident insurance and its direct and incidental results that we wish to refer. The following points are especially to be noted: 1, All manner of safeguards of life and limb have been introduced by employers of the various insuring groups;

1. "Statistisches Jahrbuch für das Deutsche Reich," 1903.

2. hygienic conditions in places of employment have greatly improved; 3, all possible methods of treatment tending to shorten the period of convalescence after accident and to restore the working power of the patient have been introduced into the hospitals; 4, country convalescent homes have been greatly developed. It is true that superficially there appears to be in Germany a large increase in the number of accidents; that, however, is acknowledged to be due to the fact that all accidents, however slight, are now reported, and a man with a cut finger is sent to a physician. The serious complications which may follow neglect of trivial hurts is thus avoided by prompt attention.

Thus the public does not cease to enforce the employers' responsibility for the injured man until the latter is restored to active labor. The United States is the only great civilized country which continues a wasteful *laissez-faire* policy toward industrial accidents. Russia's new law enforces the employer's responsibility in a way second only to that of Germany, and in like manner France, Belgium and even England have laws which recognize the inevitable powerlessness of the workman to protect himself from the dangers of his occupation.

Doubtless it will be long before we shall see in this country any system of compulsory insurance. Indeed, the very suggestion is repugnant to the average American. Yet no candid observer, least of all any physician of large hospital experience, can doubt that the whole subject of industrial and trade accidents needs examination and publicity and some intelligent and authoritative supervision.

DRUGS AND DIET AND MIND AND STOMACH.

In the deluge of new drugs that has come on the medical profession during the last decade nothing has been more remarkable than the number of remedies suggested for gastric affections. Surely if it were possible to relieve gastric symptoms by drug treatment some one or more of the many remedies offered to the profession would have proved successful. The mineral, the animal and the vegetable kingdoms have been diligently searched and put under contribution to supply therapeutic substances. From the silver and gold which were much more recommended as gastric tonics a decade ago than they are now, down to the almost innumerable forms of ferments of all kinds which have been suggested there has been a veritable flood of remedies for dyspepsia. It has been found in most cases that any one of these remedies if given with proper suggestions as to its efficacy and, if the patients were curiously inquisitive, with added details of information as to its source, would do good for a time at least, though inevitably before long the therapeutic effects ceased to be obtained.

There has come to be a rather general impression, then, that most of these new-fangled gastric remedies, except for a certain amount of tonic stimulation, which their composition always assured for them, owed most of their beneficial effect to the influence on the patient's mind of a new form of drug treatment. In a word, there has come to be a suspicion at least that in this as in the many tonic remedies of less ethical pretentions the only therapeutic effect directly produced has been that of the stimulant, while the supposed specific efficacy was due to mental influence. It has become more and more clear in recent years that a large number of persons—in the words of a distinguished London physician—have not enough brains to run their business and their digestion. If their brains are occupied most of the day with intellectual affairs of any serious kind this is especially sure to be the case. It is the people of the educated classes who know that they have stomachs, who are constantly pestered by the subjective symptoms which that organ gives and who are looking for remedies and modifications of diet that will save them from further annoyance.

There is no doubt that, while their minds are open to receive them, new suggestions often prove of therapeutic benefit, but these suggestions are also to no little extent responsible for the dyspeptic symptoms of which the patients complain. Too much attention is paid to the stomach and its functions, and as a consequence it does not get on well. The centipede, when asked how he could possibly walk with all his legs without getting them confused, is said to have tried to explain how it was done, but got so mixed up that he lay absolutely unable to move. Something of the same thing seems to be true with regard to these dyspeptic patients who nurse their ailments and know all the dietetic rules, especially with regard to getting up from the table hungry, not taking liquids with meals, avoiding certain foods because they have an idiosyncrasy for them, and all the other details whose safeguarding must require such an intense attention at meal time as sadly to demoralize the trophic influences flowing down from the central nervous system.

Long ago, in the early forties, Prof. Austin Flint, the elder, insisted on this connection of dyspepsia with the mind, and then nearly half a century later, in an article[1] read before the New York State Medical Association, called particular attention to the fact that his experience as a physician had completely confirmed the ideas expressed in his original paper. He insists especially that the most important direction that can be given to dyspeptics is to avoid thinking too much about themselves, about their symptoms, their diet, their personal peculiarities as to food and the like, and to tell them frankly that they should not follow so-called rules of health in this matter, but should consult their tastes and their appetites.

He said in a passage which should be in the notebook of every physician: "Do not adopt the rule of eat-

1. Transactions of the New York State Medical Association, vol. I, p. 143.

ing only at stated periods; twice or thrice daily. Be governed in this respect by appetite and eat whenever there is a desire for food. Eat in the morning or at bedtime, if food is desired. Insomnia is often attributable to hunger. In the choice of articles of diet be distrustful of past personal experience and consider it to be a trustworthy rule that those articles will be most likely to be digested without inconvenience which are most acceptable to the palate. As far as practicable let the articles of diet be made acceptable by good cooking. As a rule, the better articles of food are cooked, the greater the comfort during digestion. Never leave the table with an unsatisfied appetite. Be in no haste to suppose that you are separated from the rest of mankind by dietetic idiosyncracies and be distrustful of the dogma that another man's meat is poison to you. Do not undertake to estimate the amount of food which you take. In this respect different persons differ very widely, and there is no fixed standard of quantity which is not to be exceeded. Take animal and vegetable articles of diet in relative proportions as indicated by instinct. In the quantity of drink follow Nature's indication, namely, thirst. Experience shows abundantly that, with a view to comfortable digestion, there need be no restriction in the ingestion of liquids."

There seems to be no doubt that if this common-sense method of dealing with these frequent and bothersome patients who usually want to take so much time in explaining their idiosyncrasies should be more generally followed we should hear much less of the multitudinous stomach remedies and especially of the far-fetched ferments of whose efficacy there is *prima facie* doubt, though they come lauded with all the alluring pseudoscience of the professional advertising agent. Along this line lies peace and progress for both physician and patient. With intestinal function carefully regulated, it is not digestive specifics, but freedom from worry and a return to pristine habit and instinct that will restore dyspeptics to their place among those with *mens sana in corpore sano.*

THE TREATMENT OF BACTERIAL DISEASES BY VACCINES.

The discovery of the diphtheria antitoxin at the end of the last century gave rise to hopes regarding the treatment of other bacterial diseases, which were soon dashed to the ground. In the years succeeding the discovery of diphtheria antitoxin, a mass of facts bearing on the general subject of infection was collected, and bacteriologists soon realized that bacteria secreting so-called exotoxins were very much in the minority. Most of the bacterial infections to which the flesh is heir are due to germs which produce endotoxins which cannot be combated by the methods used against diphtheria, botulism and tetanus. In his introduction of tuberculin, Koch was the first to suggest a procedure having in view the destruction within the body of an endotoxin-producing organism, the tubercle bacillus. The failure of this treatment, under Koch's own method of administration, is known to all, and has led to its almost complete abandonment.

Some three years ago A. E. Wright, in England, suggested what was a modification in the method of administration, rather than a modification in the principles of manufacture of bacterial vaccines. Wright's work, however, was based on some new observations on the protective mechanism of the human body, in that it was preceded by the discovery that besides antitoxins and other reactive substances, the blood serum normally contains protective bodies which Wright called opsonins. These opsonins, which seem to be present in normal individuals in an almost equal quantity, are reduced before or in the early stages of a bacterial infection, and vary greatly during the course of a bacterial disease. The method of treatment which has been applied to diseases produced by bacteria having endotoxins, such as the *Bacillus typhosus,* has usually been that of inoculation with a vaccine composed of the dead bodies of the bacteria and their soluble products. Hitherto such inoculations have not been based on any accurate method, the dose has been gauged empirically, and the administration has been rather a haphazard performance. The work of Wright has shown that under such methods it was just as easy to do harm to the patient as to benefit him, perhaps a little easier. Wright and other workers, such as Bulloch,[1] have shown that there are times during a bacterial infection when the system is not manufacturing opsonins in normal quantities, and, on the other hand, there are times when large amounts of opsonin are being produced. According to Wright, the manufacture of opsonins, or antitropins as he now calls them, follows a definite law. He calls this the law of the ebb, flow and reflow, and subsequent maintained high tide of immunity. If a patient with a given bacterial disease, say for example, tuberculosis, is inoculated with tuberculin during the ebb in antitropin formation, the result is an actual increase in the poisoning of the individual, and naturally an increase in the severity of the symptoms. If, on the other hand, the individual is inoculated at a time when the system is producing large numbers of antitropins, i. e., during the flow, the inoculation stimulates the system still further to the production of antitropins, and the result is the improvement of the patient.

So far Wright has applied his method mainly to two conditions: tuberculosis and staphylococcus infections. The results of his treatment have been exceedingly encouraging. Most of his work has been done on patients who had been given up after the utter failure of ordinary treatment, and the percentage of cures and improvements is quite high. The method is in many ways quite complicated, requires for its carrying out a laboratory, and needs the supervision of one who has had experience in the work. It is a form of treatment which

1. The Practitioner, 1905, vol. lxxv, p. 589.

will almost of necessity fall into the hands of the large hospitals, and which can never be carried out by the general practitioner. So far but little practical work has been done outside of London, where Wright and his associates have worked, but the treatment promises so much, and if successful, will be applicable to so many diseases, that it is to be hoped that it will be given an extensive trial.

MAGNESIUM SULPHATE AS AN ANESTHETIC.

Few greater boons have been conferred on humanity than that which has resulted from the discovery and application of ether and chloroform as anesthetics. America may well be proud of the part that has been given to her to play in this matter, and if we read the indications aright further honor is to come to her for new and important discoveries of scarcely less magnitude. The American mind has shown itself to be an eminently practical one, but it is none the less scientific. It is practical because its discernment is clear and its reasoning correct—and science is but applied precision.

The latest exemplification of the foregoing statements is found in the results of a series of experiments carried on by Dr. S. J. Meltzer in association with Dr. John Auer and reported at a recent meeting of the New York Academy of Medicine.[1] These investigators were able to demonstrate the possession by magnesium-salts of hitherto undescribed inhibitory and anesthetic properties susceptible to therapeutic application. Dr. Meltzer had formulated the view that the phenomena of life result from the interaction of excitation and inhibition. Of the four main inorganic constituents of the body it has been shown that sodium, potassium and calcium have a stimulating effect on muscle and nerve. It was, therefore, concluded that the inhibitory activity must reside in the magnesium, and accordingly a study of the salts of this body was undertaken. It was found in animals that intracerebral injections of magnesium sulphate induce a state of general inhibition. It was next discovered that intravenous injections of various magnesium-salts in small amount inhibit respiration and cause paralysis of the entire body; that local applications to nerve-trunks blocked conductivity and abolished excitability; that subcutaneous injections cause deep narcosis, with complete muscular relaxation, while subarachnoid injections cause almost immediate anesthesia and paralysis of the posterior extremities. In addition it was found that intravenous injections of magnesium-salts almost instantly check intestinal peristalsis, while severe tetanus and opisthotonos induced in monkeys by tetanus-toxin can be completely removed for many hours by subcutaneous injection of magnesium sulphate.

The several procedures mentioned having proved innocuous in animals it was decided that they might be applied to man with safety. Accordingly, twelve patients were given intraspinal injections of magnesium sulphate prior to operation at the hands of several surgeons. It was found that the best amount to employ is one cubic centimeter of a sterile 25 per cent. solution to every twenty-five pounds of body weight and the best time for operation is three or four hours after the injection. The effects observed consisted in paralysis of the legs and of the region of the pelvis, with analgesia sufficient to permit surgical operations. Larger doses give rise to profound general anesthesia, with marked depression of respiration. There is also retention of urine, which may persist for one or two days. Sensibility and motility return as a rule within from eight to fourteen hours.

It is not likely that intraspinal injections of magnesium-salts will replace inhalation of ether or chloroform for purposes of surgical anesthesia, but there are times when the latter cannot be practiced with safety, and although the former is not wholly free from risk, it has advantages over other forms of intraspinal anesthesia, and it may be found that it is susceptible of application under the circumstances mentioned. In any event the method is worthy of careful trial.

1. Medical Record, Dec. 16, 1905, p. 965. See abstract in THE JOURNAL, December 30.

RECOGNITION OF MEDICAL ORGANIZATION.

In New Orleans there is a popular movement in favor of permitting the Louisiana State Medical Society to nominate the president of the State Board of Health. The Governor, who has the appointing power, has not yet announced his position toward this proposal, but all classes of citizens in New Orleans seem to favor the innovation. This can only be regarded as a genuine recognition of the altruistic services of the medical profession to the community and as an expression of confidence in the purposes and principles of medical organization. We shall hear more of this sort of thing as organization proceeds and fulfills its proper duties.

SUICIDE AND SELF MANSLAUGHTER.

A person who is supposedly sane and who sacrifices his life through willful neglect—whether this be due to pride not permitting him to ask for help or to religious delusions forbidding him to take the needed measures for his preservation—is little different from an ordinary suicide. The London coroner at Rotherhithe, however, makes a distinction. A man had deliberately refused to seek medical aid on account of his belief in faith-healing, and the coroner instructed the jury that since there was no evidence that the man had refused medical advice with the sole object of ending or shortening his life, the verdict could not be suicide by omission or self-neglect. It was, therefore, not a case of self-murder but of self-manslaughter—an offense not recognized in the criminal code. There is a distinction here with a difference, if the man really believed he was going to get well by faith alone, spurning all material aid thereto, but it is hard to see how the criminal law can safely consider such proceedings as without its pale. There seem to us to be large possibilities for evil in such a course. So far as the results to society and the

individual are concerned, there is little difference between such a course and suicide, and the law is for the protection of society and the individual. When it comes, moreover, to the aiders and abetters of such transactions, no matter what are claimed to be their motives, it does seem as if the law should have power to intervene, especially when they attempt to apply their principles to the irresponsible and helpless. We must remember also that suicide does not itself always imply moral obliquity. A very large proportion of suicides are clearly irresponsible, and the degree of responsibility in many others is difficult to decide. The distinction, therefore, between self-murder and self-manslaughter seems to be rather a vague one, and we believe it would be better for the community if a coroner's verdict of suicide or homicide by neglect were brought in every case of avoidable death under Eddyism, faith cure and similar methods.

BIRTH RATES.

It is a well recognized fact and needs no verification that the poor are more prolific than the rich; the reasons are also well known. According to the *New York World* of November 30, out of 55,000 babies born in the borough of Manhattan only 13 came to fashionable Fifth avenue below Ninety-fifth street. That is only 13 babies in a thoroughfare bordered by the homes of the well-to-do for four and one-half miles. The contrast between these figures and those of the populous sections inhabited by the proletariat is certainly striking enough, and we must think that there are some elements in the statistics that are perhaps deceptive. New York is in the registration area and the figures ought to be correct, but it seems to us as possible that many of the offspring of the rich New Yorkers may be born away from home and thus affect the figures.

THE PRECIPITIN TEST FOR HUMAN BLOOD.

The importance of the precipitin test in determining biologic relationships has been clearly set forth in Nuttall's fine monograph on the subject, and it must be admitted that the facts there instanced certainly tended to diminish the value of the test from a medicolegal standpoint. The relationship between man and the ape, for example, is shown by the fact that the serum of a rabbit inoculated with human blood gives a precipitate not only with human blood, but also, though in less degree, with the blood of the ape. The precipitation of an immune serum by the blood of allied species as well as by the specific blood used for inoculation is a circumstance that naturally prevents the formulation of any such dogmatic statement as seems required by the exigencies of the law. Uhlenhuth's[1] discovery, however, seems to remove this difficulty. The inoculation of rabbits with the blood of the closely-related hare gave rise to a serum which precipitated when mixed with hare's blood, but had no action on the blood of the normal rabbit. Similarly apes inoculated with human blood produced a serum that had high precipitating power for human blood, but was inactive for apes' blood even in low dilution (1:10). These results are somewhat at variance with those obtained by other observers who have found it difficult to produce potent antisera with the blood of closely-allied species. Uhlenhuth explains this, however, by individual idiosyncrasy in the experiment animals, and considers that while some individuals may not lend themselves readily to the production of antisera with the blood of kindred species, others are favorable for this purpose. If his results are confirmed it is evident that when sera produced by this method are used the value of the precipitin test in legal medicine will be greatly enhanced.

1. Deutsche med. Wochft., 1905, 31, p. 1673, abstracted in THE JOURNAL A. M. A., Dec. 23, 1905, p. 1992.

THE PATHOLOGIC ANATOMY OF EXOPHTHALMIC GOITER.

So many and such varied anatomic conditions have been found in connection with exophthalmic goiter that it is not easy to decide which are essential and distinctive and which non-essential and accidental. The most common of these consists in certain histologic alterations in the enlarged thyroid gland, to whose overaction the principal symptoms of the disorder appear to be due. Such alterations were found with great frequency by Dr. W. C. Mac Callum[1] in a series of 28 cases studied histologically. They involved the form and size of the alveoli, the character of the epithelial cells, and of the colloid, the vascular supply, the connective-tissue framework and the lymphoid structures of the thyroid gland. The alveoli vary greatly in size and form, the epithelium of many being folded in such a manner as to yield an appearance of sending off long diverticula, which frequently become constricted off and form new alveoli. The epithelium changes from a flat or cubical type to the high cylindrical form. The colloid is markedly diminished in amount and presents a ragged appearance. The vascular supply is extraordinarily rich, the veins being especially large and distended with blood. The latter lie for the most part in the abundant connective-tissue framework of the gland, which is increased in density, considerable bands of fibrous tissue passing through the gland and giving rise to distinct lobulation. The walls of the veins are unduly friable and the connective tissue contains a good deal of lymphoid tissue in the form of circumscribed scattered nodules. In addition circumscribed prominent nodules, composed of a more homogeneous tissue are found in varying number. These are made up of uniform, small, round alveoli, usually separated one from another and embedded in a hyaline connective tissue. They are lined with plump, rather cubical, epithelium, and they may or may not contain colloid material. Cysts of varying size, usually containing a clear greenish, somewhat glutinous, fluid, are also present at times. No bacteria or cell inclusions could be demonstrated and the parathyroid glands were found practically normal in the nine cases in which they were examined. The anatomic picture, it will be seen, corresponds most closely with that of compensatory hypertrophy, which it may be presumed has followed a previous injury to the gland inflicted perhaps by some infectious disease.

1. Bull. Johns Hopkins Hosp., vol. xvi, No. 173, p. 287.

Medical News

CALIFORNIA.

Sanitarium Opened.—Loma Linda Sanitarium, near Redlands, was opened to the public October 1 under the management of Dr. George K. Abbott. It is operated under the methods of the parent institution in Battle Creek, and its régime includes all branches of physiologic therapeutics.

October Vital Statistics.—The returns from 53 out of 57 counties for October show an annual birth rate of 13.1 and an annual death rate of 14.9 per 1,000. During the month 1,873 living births were reported, and 2,117 deaths, not including stillbirths. Tuberculosis was the leading specific cause of death in the state, but of those who died from the disease 11.4 per cent. had lived in the state less than one year.

Personal.—The Point Richmond Board of Health met November 23 and elected Dr. Hawley N. Barney health officer.——Dr. Louis C. Deane, San Francisco, has gone to Germany.——Dr. D. C. Strong, Redlands, has assumed his duties as superintendent of the San Bernardino County Hospital.——Dr. H. Miller Robertson, Arlington, has been elected county physician of Riverside County, vice Dr. Isaac A. McCarty, Corona, resigned. ——Dr. Warren T. Barr has been appointed a member of the Fresno health board vice Jacob H. Parseghlan, resigned.—— Dr. William H. Brooke has resigned as a member of the Alameda board of health on account of removal from the city.—— Dr. Lewis Q. Thompson, Gridley, is seriously ill with septicemia.

GEORGIA.

Insanity Among Negroes.—Dr. T. O. Powell, superintendent of the Georgia State Sanitarium, Milledgeville, is reported as saying that there are 900 negroes now at the State Hospital and that many more are awaiting admission.

Personal.—The governor on December 5 reappointed Dr. Charles J. Montgomery, Augusta, and Dr. William F. Brunner, Savannah, as members of the trustees of the Georgia State Sanitarium, Milledgeville.——Dr. Thomas P. Waring, Savannah, was operated on December 2 for appendicitis and is making satisfactory progress.——Dr. Owen T. Kenyon, Dawson, shot and killed R. E. Dickinson in Atlanta, November 25, in self-defense. No charge was preferred against Dr. Kenyon.

IDAHO.

Epidemic Diseases.—Diphtheria is prevalent to such an extent at Burke that the public schools have been ordered closed and public meetings prohibited.——The publication committee of the Boise Medical Society has issued a circular denying the rumors that typhoid fever is epidemic in the city and stating that the disease is sporadic and that in fully one-half of the cases it was contracted outside of the city.

Society Upholds Dr. Nourse.—Dr. Robert L. Nourse, Hailey, has been fined $300 and costs for contempt of court because of language used in his address before the Idaho State Medical Society, criticising the action of the Fourth Judicial District Court in the case of Dr. Raff against the Idaho Board of Medical Examiners. Dr. Nourse is supported by the state medical society and will make application for a writ of review.

ILLINOIS.

Reappointments.—Dr. Vaclav H. Podstata has been reappointed superintendent of the Cook County Institutions, Dunning, and Dr. Haim I. Davis, county physician.

Smallpox.—Several cases of smallpox have appeared in Jersey, Greene and Macoupin counties, and on December 17 reports were received of the appearance of the disease at Galesburg and Spring Valley.

For a Visit Only.—Dr. Lemuel Tibbetts, Rockford, requests the correction of the statement in THE JOURNAL that he was about to move to California. He expects to visit California for two or three months, leaving about the middle of January.

Physicians Vindicated.—In the case of Dr. Joseph R. Hollowbush, Rock Island, charged with perjury by Jerry McCarthy, the state's attorney authorized the dismissal of the case, completely vindicating Dr. Hollowbush.——After a trial occupying ten days the jury in the case of C. E. Demsey against Dr. St. Elmo M. Sala, Rock Island, for damages on the charge of alleged malpractice, returned a verdict for the defendant.

Coroner's Cases.—The coroner of Cook County in his annual report shows that 3,482 cases were investigated in his office since Dec. 1, 1904. Of this number 1,185 deaths were from natural causes and 453 were suicides. Of the latter 159 died from gunshot wounds, 83 from asphyxiation, 11 by jumping from heights, 20 from drowning, 2 from setting fire to clothing, 26 from cutting or stabbing, 6 from jumping under trains, 43 from hanging, and 103 from poisoning.

Dedication of Ottawa Tent Colony.—On December 12 the Tent Colony for the Treatment of Tuberculosis, Ottawa, was formally dedicated. Dr. Frank Billings, Chicago, made the principal address, in which he told in plain terms the latest decision of science regarding the treatment of tuberculosis, and eulogized Dr. James W. Pettit for his work in the cause of humanity. Two years ago the state medical society authorized Dr. Pettit to make this experiment at his own expense. In closing, Dr. Billings said the greatest work that Dr. Pettit has done has been to humanity in general by setting a great living example of right living to all the world, "and these things I say not in flattery, but in envy of the great work that Dr. Pettit has been permitted to do at a great sacrifice to himself." Dr. George A. Zeller, superintendent of the Illinois State Hospital for the Incurable Insane, Bartonville, in his address, praised Dr. Pettit for reducing the per capita cost for the care of tuberculous patients and stated that the modern method of treating tuberculosis was being followed as far as possible in the state institutions. A buffet luncheon was served at the club house and public exercises were held in the pavilion.

Chicago.

Deaths of the Week.—During the week ended December 16, 489 deaths occurred, equivalent to an annual death rate of 12.80 per 1,000, which is nearly 12 per cent. less than the rate of the previous week and the rate of the corresponding week last year, 15 per cent. less than the average December rate of the last decade and 1 per cent. less than the lowest previous recorded rate. Of the deaths 81 were due to pneumonia, 69 to consumption, 35 to nephritis, 33 to violence (including suicide), 32 to cancer, and 30 to heart disease. One death was caused by scarlet fever, 11 by diphtheria, and 4 by typhoid fever.

INDIANA.

Golden Wedding.—Dr. and Mrs. T. B. Noble, Greenwood, celebrated their golden wedding anniversary November 30.

Medical Faculty Entertained.—The University Club of Purdue University entertained the faculty of the Purdue School of Medicine, Indianapolis, at the Hotel Lahr, Lafayette, December 9. President W. E. Stone of Purdue University officiated as toastmaster. Drs. George Kahlo, Indianapolis; Christian B. Stemen, Fort Wayne, and Myles F. Porter, Fort Wayne, responded to toasts.

Laboratory Instruction.—At the health officers' school, held in Indianopolis under the direction of the State Board of Health, December 14 and 15, instruction was given in the work of the pathologic and bacteriologic divisions of the State Laboratory of Hygiene, including demonstration of the Widal test, diphtheria cultures, tubercular bacilli, bacteriologic analysis of water, preparation of specimens for shipment, methods of obtaining analysis from the laboratory, and general laboratory procedure.

Personal.—Dr. William B. Fletcher, Indianapolis, was seized with cerebral hemorrhage December 11, and is critically ill.—— Dr. John M. Nickels, Sellersburg, has been appointed physician for the poor farm of Clark County, succeeding Dr. Charles M. Bottorff, Charlestown.——Dr. Brose S. Horne, Marion, has located at Jonesboro.——Dr. Albert H. Combs has been appointed a member of the health board of Marion.——Dr. Frank G. Jackson has resigned as a member of the Muncie board of police commissioners.——Dr. Samuel E. Smith, superintendent of the State Hospital for the Insane, East Haven, has been appointed expert advisor to the Southeastern Hospital commission.——Drs. Edmund D. Clark, Thomas B. Noble and Frank A. Morrison have been appointed the board of health of Indianapolis.——Dr. Norman E. Jobes has been appointed superintendent of the City Hospital, Dr. Eugene Buehler city sanitarian, and Dr. Edgar F. Kiser superintendent of the city dispensary.——Drs. John C. Wood and Roscoe W. Payne have been appointed members of the Franklin board of health.—— Dr. Frank W. Black, Ligonier, has been appointed coroner of Noble County.——Dr. Irvin J. Becknell, Goshen, has been appointed secretary of the Elkhart County board of health.

IOWA.

Fire Loss.—The residence of Dr. Cassius C. Cottle, Marshalltown, was destroyed by fire November 27, with a loss of $12,000.

Typhoid Fever.—Typhoid fever has assumed an alarming proportion at Estherville. Four deaths occurred in one day last week.

In Fashion.—Des Moines is being visited with an epidemic of grippe, with the neuralgic symptoms recently reported to be prevalent in London.——Sioux City is said to be suffering from a similar epidemic.

Illegal Practitioner Fined.—Dr. J. C. Wilhite, who was convicted November 25 of the illegal practice of medicine, was sentenced to pay a fine of $300 and costs. Wilhite says he will appeal to the Supreme Court.

Personal.—Dr. Benjamin O. Kittleman, Des Moines, was operated on for tuberculosis, December 3, and is making a good recovery from the operation.——Dr. Nicholas Schilling, New Hampton, sailed for home from Naples, December 8.——Dr. Henry C. Young, Bloomfield, was operated on for appendicitis, December 3, and is doing well.——Dr. George M. Kline, Mount Pleasant, has accepted a position on the medical staff of the new State Hospital for the Insane, Ann Arbor, Mich.

KANSAS.

Personal.—Dr. James A. Trowbridge, La Harpe, expects to leave early in January for Europe.

Donation to Hospital.—Dr. Simeon P. Bell has added $20,000 to his donations to the Kansas University Hospital, Rosedale, making a total of $90,000, including the site on which the medical buildings are erected.

Diphtheria.—Yates Center has had 3 deaths from diphtheria. Five residences are under quarantine and schools and other public meeting places have been closed.——During October there were 364 cases of diphtheria reported in the state, with 41 deaths, an increase of 140 over September and an increase of 30 in deaths. The disease is said to be prevalent in 33 counties.——Quarantine measures are being enforced in Oakland.——The schools in Toronto and in Neal have been closed.

Physicians and Political Appointments.—Kansas physicians believe that in the interest of the public welfare the State Medical Society should have something to say as to who should be on the State Board of Health and the State Board of Examination and Registration. The governor of the state, however, seems to think differently. The following excerpt from an editorial in the *Journal of the Kansas Medical Society* gives some idea of the situation:

> At the Wichita meeting three men from each county were selected as representatives of the profession and presented to Governor Hoch with the request that he select new men from this list. The governor saw fit to ignore us utterly, and appointed men who, doubtless on account of their relation to politicians or of their business ability, seemed to him the ideal physicians. But not one of the appointees was in touch with the modern movement in medicine, and, therefore, in spite of their personal charms, were hardly fitted to make and execute laws affecting so vitally our profession.
>
> We do not wish to mix up in politics, but it looks as if Governor Hoch were going to force us to do so. He thinks us a negligible quantity simply because we have not flocked before him and pestered his life with importunities. We evidently must change our policy and get after every politician in every county where we are organized. We can have great influence on even Governor Hoch's renomination and election. We can see to it that every new assembly man is pledged to give us the "square deal"—and to take our side against the vacillations of our Nicolaian governor. Every member will please do what he can for himself in this matter, but more especially hold himself in readiness to respond to Secretary Huffman's telegraphic or written directions.

KENTUCKY.

Medical College Opens.—The Louisville Medical College opened its thirty-eighth annual session December 10, with a lecture by Dr. Clinton W. Kelly.

Sanatorium Opened.—The new sanatorium at Hopkinsville was opened by Dr. C. B. Petrie, November 19, and on that day the Christian County Medical Society held its regular meeting in the building as the guest of the proprietor.

Railway Hospital Service Wanted.—Representative Rihnock, Covington, has introduced a bill into Congress asking for the establishment of a railway hospital service, organized along the same lines as the United States Marine-Hospital Service.

Diphtheria and Smallpox.—Diphtheria has developed at Turner's Station and Smithfield, Henry County. At the former place the school has been closed on account of the disease.——Smallpox has appeared at Middlesboro, where 48 cases are reported.——Several new cases of smallpox are reported in the vicinity of Nepton.

Kentucky Railway Surgeons Organize.—About 40 railway surgeons of the state met at Lexington, December 1, and organized the Kentucky State Association of Railway Surgeons. Dr. Richard C. Falconer, Lexington, was elected president; Dr. Clarence H. Vaught, Richmond, vice-president, and Dr. James B. Kinnaird, Lancaster, secretary and treasurer. The next meeting will be held in Richmond, June 15, 1906.

Health Officer Wins.—The suits filed against Dr. Maverell K. Allen, health officer of Louisville, by George Churchman, a dairyman, to recover $145 alleged damages for loss on milk and to recover $50 for alleged damages to the plaintiff's business, have been decided in favor of the defendant. Last summer Dr. Allen instigated proceedings against Churchman because he failed to produce a certificate that milk furnished him by a Shelby county farmer was from perfectly healthy cows, as required by the city ordinance.

LOUISIANA.

Children's Sanatorium.—A sanatorium exclusively for children is to be located at 850 Carondelet Street, New Orleans, in charge of Dr. Erastus D. Fenner.

Wish to Name State Health Officers.—At a meeting of the governing committee of the New Orleans Health Association, December 5, the following resolution was adopted: "*Resolved*, That it is the sense of this association that the nomination for state health officer be made from the recommendations of the State Medical Society."

Personal.—Dr. Arthur Weber has resigned as a member of the New Orleans Board of Health.——The Shreveport Medical Society on December 6 adopted a resolution indorsing the selection of Dr. Clifford H. Irion, Benton, for president of the State Board of Health.——Dr. J. Ashton Blanchard, Shreveport, has been indorsed for appointment as a member of the State Board of Health by Dr. T. E. Shumpert, a majority of the city council and 25 members of the local medical fraternity.

MAINE.

Released.—Dr. Charles A. Eastman, Old Orchard, convicted of manslaughter a year and a half ago, completed his sentence in the county jail and was released November 29.

Medical Club Meets.—The twenty-eighth annual meeting of the Portland Medical Club was held December 7, at which the following officers were elected: President, Dr. Herbert J. Patterson; vice-presidents, Drs. Chauncey R. Burr and Owen Smith; secretary and treasurer, Dr. George H. Turner, and censors, Drs. Stanley P. Warren, Walter D. Williamson and F. P. Webster.

Fight Smallpox.—In order to prevent the introduction of smallpox from New Brunswick into Maine the State Board of Health has established a provisional inspection service at Vanceboro under the care of Dr. Melvin L. Young, and has petitioned the surgeon general of the United States Public Health and Marine-Hospital Service to establish a permanent station at Vanceboro.

General Hospital Report.—The fourteenth annual meeting of the Central Maine General Hospital Association, Lewiston, was held December 5. The number of patients treated during the year was 1,127, an increase of 65 over the preceding year. At the close of the fiscal year there remained under treatment 49 patients. Of the number under treatment in the hospital 668 were discharged cured, 109 improved, 12 unimproved, 58 were given advice but not treated, and 47 patients died.

MARYLAND.

Graduates Gather Medical Articles.—The graduates of the Johns Hopkins Medical School have sent their "Collected Papers" to Dr. William Osler. They are contained in 12 superbly bound quarto volumes with index and also a table of contents for each. They represent eight years of work and embrace 465 separate contributions relating to a great variety of subjects.

New Hospital Opens.—The new Allegany County Hospital, Cumberland, held its formal opening December 8. The following comprise the directors of the medical staff: Dr. E. B. Claybrooke, president; Dr. C. H. Brace, vice-president; Mr. Arch A. Young, secretary and treasurer; Drs. George L. Broadrup and Arthur H. Hawkins, and Messrs Lloyd Lowens and R. A. Claybrooke. The attending staff is composed as follows: Surgical, Drs. W. R. Foard, E. B. Claybrooke, Henry S. Wailes, Arthur R. Hawkins, George L. Carder and Edwin Harris; medical, Drs. C. H. Brace, George L. Broadrup, C. L. Owens, Willys R. Hodges and E. H. White; eye, ear, nose and throat, Drs. Robert Y. Fechtig and E. L. Jones, and pathologist, Dr. W. R. Foard.

Baltimore.

Opie's Portrait.—A movement is on foot at the College of Physicians and Surgeons to have a portrait of Dr. Thomas

Opie, the late dean, painted, to be hung in the college building. Dr. Opie has given the college library a large number of books.

Personal.—Dr. Howard Kelly, accompanied by four of his children, will leave for a hunting and fishing trip in Florida the last of this month.

Hospital Incorporated.—St. Luke's Hospital was incorporated December 13 by a number of physicians, to conduct a hospital, dispensary and training school for nurses.

Internes Resign.—The four internes at the City Hospital whose resignation was recently noted severed their connection with the hospital, it is reported, because one of their classmates had been placed in authority over them. The vacancies have been filled.

Pasteur Institute Report.—In his annual report of the Pasteur department of the City Hospital, Dr. Nathaniel G. Keirle, director, claims that there has been but one death out of the 775 cases. Three other patients died, but before they had received the full treatment.

Visiting Nurses' Work.—The Instructive Visiting Nurses' Association held its annual meeting December 5. It was addressed by Dr. Lewellys F. Barker and Miss Damer, president of the Association of Nurses of the United States. The report showed that eight nurses had made 23,811 visits, and that a deficit existed of $541. Dr. Barker urged that there was eight times as much work to be done, and that the hospitals can not begin to care for all who need medical attention.

Personal.—Dr. James D. Iglehart is in New York City.——Dr. Santiago U. Samodeville will spend the winter in Havana.——Dr. William H. Welch has been elected a member of the board of trustees of the Carnegie Institute, in place of the late John Hay.——Dr. George A. Hartman has been appointed a member of the jail board.——Drs. Alexander D. McConachie, Arthur Wegefarth and Edward A. Hartman were elected directors of the Northeastern Dispensary.——Dr. B. Merrill Hopkinson has been elected president of the Baltimore Athletic Club for the fourteenth consecutive year.

MASSACHUSETTS.

Rival Candidates Physicians.—The city of Worcester elected for mayor, December 12, Dr. John T. Duggan, a democrat. His competitor was Dr. Melvin G. Overlook, republican.

Insane Hospital Report.—The trustees of the Northampton Hospital report that on October 1 there were 771 patients; 401 were admitted during the year, 303 were discharged and 79 died. Of the admissions, 199 were men and 202 women. Of those discharged, 84 were well, 30 improved and 25 not improved. The weekly cost per capita was $3.57, 21 cents less than last year. Under the new law of the state, 9 patients were boarded out. The average duration of insanity in those who died was 19 years, and the average length of stay in the hospital 9 years.

Hospital News.—At the annual meeting of the North Adams Hospital staff October 31, Dr. Henry J. Millard was elected president, and Dr. Edward E. Russell, secretary; Drs. Frank D. Stafford and Adolphe Mignault were elected members of the advisory board, and Dr. John F. C. Forrester was made a member of the staff.——By the generosity of D. B. Wesson, a maternity hospital will be added to the charitable institutions of Springfield. It will contain 25 rooms and will cost from $100,000 to $200,000.——A. C. Houghton, North Adams, has given a new operating room to the North Adams Hospital.——Mr. and Mrs. F. A. Day, Newton, have presented a new building to Newton Hospital, to be used as a home for nurses, which has cost about $30,000.

MINNESOTA.

Hospital Incorporated.—The United Church Hospital, Minneapolis, was incorporated December 9.

Sanitarium Burned.—Pine Ridge Sanitarium for Consumptives was destroyed by fire December 2, entailing a loss of about $2,000.

Dr. Bly Guilty.—Dr. Theron H. Bly, Minneapolis, was found guilty, on December 8, of performing a criminal operation on Hilda Rosen which resulted in her death. The prisoner was released after filing a $2,000 appeal bond.

Dr. Smeallie's Deatn.—The widow of Dr. James A. Smeallie, Cass Lake, whose death notice appeared in THE JOURNAL of December 9, writes that he died after an illness of nine days from pleuro-pneumonia, and not from tuberculosis, as stated.

Rules Against Physicians' Defense Company.—The attorney-general of Minnesota has ruled against the Physicians' Defense Company in its complaint against the Maryland Casualty Company and other casualty companies which are writing physicians' defense policies in Minnesota. The ruling asserts that not only may the casualty company continue to write physicians' defense contracts, but that hereafter the Physicians' Defense Company must comply with the Minnesota insurance laws, which has not heretofore been required.

MONTANA.

Personal.—Dr. M. William Feenan, Anaconda, has been appointed county physician of Butte County, vice Dr. T. J. McKenzie, term expired.

Medical Examiners Sustained.—After short deliberation December 7, the first jury in the history of the state, composed solely of physicians, returned a verdict sustaining the action of the State Board of Medical Examiners in refusing a certificate to practice medicine to John H. Foley, Great Falls. This jury was subpenaed under the law passed by the last legislature, which provides that a jury of doctors may be subpenaed by a district judge to hear an appeal in such cases.

NEBRASKA.

Faculty Changes.—The following changes have been made in the faculty of the College of Medicine of the University of Nebraska, Lincoln: Dr. Charles W. M. Poynter, adjunct professor of anatomy; Dr. L. B. Pilsbury, instructor in bacteriology and pathology; Dr. John M. Mayhew, instructor in medicine; Dr. Harry H. Everett, instructor in surgical pathology, and Dr. Harry J. Lehnhoff, instructor in surgery.

Hospital Dedicated.—The new Swedish Hospital, Omaha, was dedicated November 19, the dedication address being delivered by the Hon. John L. Kennedy. The hospital will accommodate 28 patients. The medical staff is made up as follows: Dr. Artnur C. Stokes, attending surgeon; Dr. Roy A. Dodge, assistant; Dr. Charles C. Allison, consulting surgeon; Drs. William R. Hobbs, Rudolph Rix, Carl L. F. Swanson and Paul H. Ellis, attending physicians; Dr. Samuel K. Spalding, mental and nervous diseases; Dr. H. L. Akin, diseases of the stomach; Dr. Harry M. McClanahan, diseases of children; Dr. D. C. Bryant, diseases of the eye and ear; Dr. George H. Bicknell, diseases of the nose and throat, and Dr. James S. Foote, pathologist.

NEW JERSEY.

Hospital Incorporated.—The Hospital of the Immaculate Conception has been incorporated at Orange.

Found Guilty.—Dr. Alfred C. Pedrick, Passaic, on December 5 was found guilty of performing a criminal operation on Mrs. Mary Steinberg, Passaic, by reason of which she was placed in imminent danger of death. Sentence was deferred.

Contagious Diseases.—There have been reported 18 cases of scarlet fever in Paulsboro and two of the schools have been closed. Two cases of diphtheria have also developed.——Dunellen is under quarantine on account of the prevalence of diphtheria.

Personal.—Dr. William H. Shipps, Bordentown, has been elected acting secretary of the State Board of Medical Examiners, vice Dr. E. L. B. Godfrey, Camden, away on leave of absence.——Dr. Henry B. Whitehorn, Verona, has been chosen president and Dr. Edwin M. Ward, Bloomfield, vice-president, of the Mountain Side Hospital staff, Montclair. Dr. Charles H. Bailey, Bloomfield, has resigned as president of the hospital.——Dr. H. H. Tomlin, Hammonton, has been appointed junior resident physician at the Altoona (Pa.) Hospital.

NEW YORK.

Physicians' Club.—The physicians of Poughkeepsie have formed a club for scientific and social discussion, to meet monthly at the houses of its members.

Resolution Against Tuberculosis Hospital.—The Medical Society of Richmond County has adopted a resolution condemning the proposition to build a $2,000,000 tuberculosis hospital in Richmond, declaring that the climate there was detrimental to the successful treatment of this disease. It is claimed that such an institution would be detrimental to the health and best interests of Staten Island.

New York City.

Medical Officer for the Comptroller.—The post of medical examiner for the finance department, with a salary of $2,500, was created on the recommendation of Comptroller Grout. The duty of this officer will be to look after the claims against the city for damages for personal injuries.

Aid for Hebrew Sanatorium.—The following additional subscriptions have been received for the Sanatorium for Hebrew

Children at Rockaway Park: Charles L. Hallgarten, $500; Sigmund Newstadt, $500; Mrs. A. Scheitel, $150. The subscriptions for this institution now amount to about $25,000.

Bellevue Rebels.—Bellevue has rebelled against drunkards. Dr. A. Armstrong has issued an order that plain alcoholic patients will not be extended the courtesy of the hospital during the sobering-up process. It is feared that this order may cause a rupture between the hospital authorities and the police, for the latter have repeatedly mistaken cases of fractured skull for alcoholism.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended December 9, 429 cases of tuberculosis, with 177 deaths; 572 cases of measles, with 7 deaths; 334 cases of diphtheria, with 40 deaths; 187 cases of scarlet fever, with 6 deaths; 94 cases of typhoid fever, with 13 deaths; 34 cases of cerebrospinal meningitis, with 15 deaths, and 222 cases of varicella. This is a total of 1,872 cases, with 258 deaths.

For Psychical Research.—Prof. James H. Hyslop has issued a prospectus of the American Institute of Scientific Research that has just been incorporated and which intends to study abnormal psychology. It is intended that the institute shall be something like the Salpêtrière under Charcot and Pierre Janet. It is proposed to study loss of the sense of personal identity, persistent hallucination, amnesia, psychic epilepsy, melancholia and paranoia.

Institute Soon to be Opened.—The Rockefeller Institute for Medical Research, to which John D. Rockefeller has given $3,000,000, will be ready for occupancy the first week in January. The site includes 26 city lots. Appointments to the staff of the laboratory will be announced soon by the board of directors. The institute will continue to aid investigators in this country and in Europe. There are now 20 men working under the auspices of the institute outside of New York. Grants of money are made to students in medical research.

Tuberculosis in New York City.—The third annual report of the committee on the prevention of tuberculosis of the Charity Organization Society says: "The tuberculosis situation in New York City is unique. At once we have, though not the highest death rate, a larger number of deaths and a far greater number of cases of sickness than any other city in the country; at the same time tnat we have a system of public and private control of the disease that with more candor than modesty we may claim as the superior of any elsewhere existing in the United States." The charity department maintained 3,959 patients in its own hospitals last year, and paid for the treatment of 783 patients in private institutions each month. The other agencies for fighting tuberculosis were eight special dispensaries, the special arrangements at Bellevue Hospital, the seaside work for improving the condition of the poor, and several others.

OHIO.

St. Alexis Alumni Meet.—The regular meeting of the alumni association of resident physicians of St. Alexis' Hospital, Cleveland, was held December 7 at the Hollenden Hotel.

Epidemics.—On account of an epidemic of scarlet fever at Jefferson the primary grades of the public schools have been ordered closed, and all Sunday schools in the town have been ordered to discontinue their sessions.——The public schools of New Philadelphia have been closed by the board of health on account of an epidemic of diphtheria; the rehearsals for an amateur theatrical performance were ordered discontinued; Sunday schools were not open for children, and children were prohibited from gathering in groups in the streets and in their homes.

State Hospital Report.—The forty-sixth annual report of the directors of Longview Hospital shows that the average of patients was 1,100, and the total number of deaths for the year, 61. The current expenditures were $184,194.20. During the year the county expended for permanent improvements $54,335.89.——The thirteenth annual report of the trustees of the Massillon State Hospital shows that the last of the new buildings authorized in 1904 is practically completed, and that there remains to be erected only one building, which is to be fireproof and designed as a hospital. During the year 404 patients were admitted and 390 were discharged, of whom 136 were considered cured, 57 improved, 13 unimproved, and 184 dead. The percentage of recoveries was 33.66. The superintendent reiterates in his report his frequently expressed opinion that inebriety is surely the forerunner of insanity. The per capita cost per annum was $108.70, or, including officers' salaries, $114.84.——The charges made by Dr. James F. Kelly, assistant superintendent, and by a clergyman of Cleveland, against the superintendent and steward of the Cleveland State Hospital, were investigated by the board of trustees and not sustained. Dr. Kelly resigned.——The commission appointed to select a site for the proposed new State Hospital for the Criminal Insane has selected a site offered by the city of Lima.

PENNSYLVANIA.

Portrait Presented.—At the regular meeting of the Erie County Medical Society, November 15, it was announced that a large portrait and all the books of the late Dr. Charles Brandes had been presented to the society by the heirs.

Personal.—Dr. William N. Stein, Shenandoah, a member of the local board of health, was appointed state medical inspector for the Shenandoah district.——Dr. Solon C. B. Fogel, Allentown, while alighting from a trolley car, December 13, fell and fractured his left leg.

Pure Food Report.—The report of the state dairy and food commissioner, published November 24, states that the results obtained by the department indicate the need for legislation regulating the manufacture and sale of drugs and chemicals. The department found that from 50 to 75 per cent. of spices are adulterated and that adulterants are used freely in confections, soda-water, jellies, jams and preserves. The investigations disclosed furthermore that certain "pure rye whiskey" is nothing more than a mixture of alcohol, prune juice and caramel. Certain brands of so-called fruit syrups, the report states, do not contain a particle of the fruit for which they are named.

Philadelphia.

Personal.—Dr. John M. Fisher has been appointed visiting chief gynecologist to St. Agnes' Hospital.

Bequests.—By the will of the late Margaretha K. Engel, the German Hospital receives $1,000.——The will of the late Solomon J. May contains a bequest of $150 for the Jewish Hospital.

Chickenpox on Steamship.—Twelve cases of chickenpox were discovered on the arrival of the steamship *Merion* at this port, November 22. The patients were removed to the Municipal Hospital.

Reading's Relief Report.—The statement of the Philadelphia & Reading Relief Association for November showed an expenditure of $23,714.80, of which $12,350 was paid for deaths and $11,364.80 for disability. The number of deaths was 22, of which 8 were from accidental and 14 from natural causes. Twelve hundred and thirty-five new cases were reported.

Bacteriologic Report.—The report of the bacteriologic laboratory of the Health Bureau for November shows that 1,295 diphtheria cultures were examined, 400 Widal reactions were made, 906 specimens of milk and 113 specimens of sputum were examined, and 3 disinfection tests were performed. The report also shows that 3,134,000 units of antitoxin were distributed.

Health Report.—The total number of deaths from all causes reported for the week reached 509, as compared with 479 reported last week, and 519 reported in the corresponding week of last year. The principal causes of death were: Typhoid fever, 10; measles, 5; diphtheria, 13; tuberculosis, 51; cancer, 17; apoplexy, 32; heart disease, 58; acute respiratory disease, 94; enteritis, 17; Bright's disease, 47; old age, 8; suicide, 7; accidents, 21, and marasmus, 8. There were 240 cases of contagious disease reported, with 26 deaths, as compared with 291 cases and 29 deaths for the previous week. Typhoid fever shows a falling off, as 111 cases only were reported this week as compared with 152 for last week.

Indiscriminate Sale of Drugs.—It has been discovered that narcotics, particularly cocain and morphin, are being sold by certain druggists in the rougher section of the city. Several young men have been discovered wholly under the influence of narcotics. Arrests have been made and it has been learned by the authorities that the cocain habitués have obtained the drug by a secret cipher code. The key to the code was given by one of the victims to the captain of detectives. The key was then tried by the captain and the drug secured. The Philadelphia Association of Retail Druggists, at a meeting December 8, adopted resolutions denouncing all pharmacists who abuse the cocain laws. Each of the druggists thus far arrested has been held in $1,000 bail.

Medical Inspection in November.—The report of the division of medical inspection for November shows that 4,705 inspections were made, excluding schools; 842 fumigations were ordered; 26 patients were examined for special diagnosis; 426 cultures were collected; 495 vaccinations were performed, and 226 injections of antitoxin were given. The report further

shows that 6,030 visits to the schools were made and that 994 children were excluded from attendance on account of disease. In all 30,524 pupils were examined and 5,310 found to be in need of medical attention. The principal diseases for which children were excluded were: Diphtheria, 14; scarlet fever, 15; measles, 15; variola, 34; ringworm, 34; tonsillitis, 58; mumps, 13; unvaccinated, 228; sprain, 1; abscess, 1. Of the 5,310 pupils recommended for treatment there were: Defective vision, 1,995; defective hearing, 166; defective speech, 19; defective teeth, 493; nasal catarrh, 113; tonsillitis, 8; eczema, 204; cataract, 1; infected wounds, 22; abscess, 19; sprains, 5; fractures, 3; carbuncle, 1; bronchitis, 18; jaundice, 1; rheumatism, 2, and revaccination, 32.

VERMONT.

Diphtheria.—Diphtheria is reported to be prevalent among the children of Burlington, and the health officer, Dr. James W. Courtney, has been instructed by the State Board of Health to make a physical examination of all children of the public schools.——Because of the appearance of diphtheria, the high and graded schools at Winooski have been ordered closed.

Benefit for Hospitals.—Nahum P. Kingsley, Rutland, has given the Rutland Hospital Association his personal check for $1,000, to be held as a trust fund, and the interest used in the maintenance of the institution.——The court has directed the executor of Col. William Austin to pay the bequest left by him for a hospital in Brattleboro to the authorities of the town, to be paid over to the hospital trustees when required.

VIRGINIA.

New Hospital.—John B. Newton, vice-president of the Virginia Iron, Coal and Coke Company, Bristol, has donated a suitable piece of land for the erection of a hospital to cost $50,000.

Hospital Secured.—The directors of the Norfolk Protestant Hospital secured, by public subscription, $11,000 of the $24,000 necessary to obtain the donation of $18,000 offered by Messrs. George L. Arps, J. W. Perry and Fergus Reed, to place the hospital out of debt, decided to underwrite the $13,000 remaining, and called on the provisional donors for the payment of the amount pledged.

WISCONSIN.

Do Not Want Names Published.—At a meeting of the Fond du Lac County Medical Society, November 9, a resolution was adopted in which the society requests that the newspapers of the city refrain from publishing the names of physicians connected with operations or accidents.

Doctors Must Take Oath.—Judge Brazee, Milwaukee, has issued an order regarding practice in the Municipal Court, to be known as rule No. 16, which sets forth that "certificates of physicians presented to the court must be subscribed to by the physician and must be sworn to by him before some official authorized to administer an oath."

Injunction Dissolved.—Dr. J. A. Schmidt, Brillion, was granted an injunction a few weeks ago against Dr. Edward Meyer, who was forbidden to practice medicine in Brillion. The restraining order was modified to permit Dr. Meyer to treat the patients he had at the time the injunction was granted. Dr. Schmidt claimed that he had a contract in which Dr. Meyer transferred certain personal property to Dr. Schmidt, including his "field of practice in this community." Judge Burnell, at Oshkosh, has decided to dissolve the injunction and Dr. Meyer is allowed to practice, but is required to make an accounting on the business done by him to the court.

GENERAL.

Yellow Fever in Cuba.—Cases of yellow fever are still reported from in and around Havana. Cases are being reported as occurring outside of what has been known as the infected district. Dr. von Ezdorf, of the Public Health and Marine-Hospital Service, reports that rain has prevailed the latter part of the week, which is unusual for this time of year. In looking over the record of yellow-fever cases reported, he states that it is interesting to note the large proportion of individuals who have contracted the disease after a short residence on the island. On December 13, two additional cases of yellow fever were reported at Colon, in the province of Matanzas.

Hawaiian Medical Association.—The annual meeting of this association was held November 18. Health affairs were discussed at some length. Dr. Day pointed out that typhoid causes a high death rate in Honolulu and urged that a better water supply should be provided. Dr. Goodhue urged the establishment of a school of tropical medicine in Honolulu, and a committee was appointed to consider the matter and report. Dr. Hodgins spoke on infant feeding and started an interesting discussion on the respective merits of condensed and sterilized milk. Dr. Peterson, superintendent of the insane asylum, declared that insane patients or those suspected of being insane are not treated as sick persons, but are arrested and thrown into jail and receive treatment that is not at all a credit to the community. The statements were corroborated by other members of the association, and a committee was appointed to consult with the bar association concerning appropriate legislation that might be submitted to the next legislature. A number of members visited the Russian cruiser *Lena*, where, as the guests of Dr. Vladimir Zabotkin, they received most courteous treatment.

Yellow Fever News.—Havana, on December 8, reported up to that date 48 cases of yellow fever, with 14 deaths. On December 11 it was reported that 15 cases were under treatment. There are now 445 men employed in the yellow-fever brigade, of whom 325 are engaged in fumigating, 100 are applying petroleum to all stagnant water, and 20 are inspecting tanks, barrels, etc. Two physicians have been fined $50 each for failing to report cases.——Arkansas finds that its military quarantine cost $36,000, all spent in maintaining a quarantine of the good old-fashioned shotgun type.——Augusta, Ga., spent $2,764.45 on its yellow-fever quarantine.——The state of Tennessee spent $10,300 in quarantine.——The work of the American Mosquito Extermination Society, New York, is commencing to be felt.——Oklahoma school authorities have about decided to include the mosquito doctrine among the public-school subjects of study.——Surgeon J. H. White, United States Public Health and Marine-Hospital Service, has been detailed to the New Orleans station. He will have as his assistants Passed Assistant Surgeons Corput, Wilson, and McKeon, all of whom saw service during the recent epidemic.——The New Orleans Health Association, on December 10, by a vote of 25 to 7, passed a resolution demanding the resignation of Health Officer Kohnke on the ground of loss of public confidence. They also appointed a committee to visit Governor Blanchard and to ask him to permit the State Medical Society to name the president of the State Board of Health.

First Meeting Under Amalgamation.—The new house of delegates of the Medical Society of the State of New York met in Albany December 14, including the chairmen of the standing committees and the joint committee of ten. The secretary was ordered to notify all county societies of the fact that they should reorganize so as to agree with the constitution and by-laws, which was part of the agreement of amalgamation. All association members were also to be notified. The counsel who made application for consolidation gave the opinion that the order from the Supreme Court judge made all members of the New York State Medical Association who are in good standing members of the Medical Society of the State of New York on the receipt of a certificate of the president and secretary of the state association. It was decided to continue the journal and the medical directory and to continue the malpractice defense for the members of the Medical Society of the State of New York. The president and secretary were ordered to continue the journal for January and February, and a committee to be appointed by the president is to select an editor and to report at the annual meeting of the House of Delegates next month. A committee of five was appointed, of which the president is one, to carry out the referendum as per Section 7 of the court order relating to the Principles of Ethics of the American Medical Association. The constitution of the American Medical Association provides that when any state medical society is reorganized according to the plan of the American Medical Association, and by resolution expresses its allegiance to that body, it then becomes a constituent branch of it. Such a resolution was unanimously carried. The per capita assessment on members of the societies was placed at $3.00. A tentative constitution and by-laws for county societies was submitted as being suggestive and which might be adopted with very slight alteration by the several county medical societies of the state.

FOREIGN.

Endowment for Scientific Research at Berlin.—A Berlin lawyer has given $12,500 to start a fund to supply financial aid to scientists studying important problems in the natural sciences, including biology and medicine.

Congress of Balneology.—The German and Austrian balneologic societies will unite in a congress to be held at Dresden in March. Liebreich will preside. The general secretary of the German association and of the congress is Dr. Ruge, Berlin W., Magdeburgerstrasse 31.

Plague in Japan and China.—Assistant Surgeon Ransom reports that plague has been declared epidemic in Osaka and Kobe. In Osaka, from November 2 to 17, there were 23 cases, with 15 deaths. Shanghai and Chefoo have declared quarantine against Nieuchwang on account of plague.

Organization of Anglo-Mexican Association.—The first meeting of this body is to be held at Torreon, Mexico, in January. At first it was proposed to limit the membership to physicians in northern Mexico, but later it was decided that all English-speaking physicians in the republic should be eligible for membership.

Skoda's Centennial.—The profession of Vienna united in a memorial meeting on December 11, the hundredth anniversary of the birth of Josef Skoda. He was professor at Vienna for only twenty-five years, but during this period won international fame by his study of physical methods of examination. He resigned his chair in 1871 on account of illness, and died ten years afterward.

Czerny to Devote Himself to Cancer Research.—It is reported that Prof. V. Czerny is to retire from the surgical clinic at Heidelberg in order to devote his energies exclusively to the Institute for Cancer Research, which was recently founded there mainly by his efforts and donations. Garré, who recently took Mikulicz's vacant chair at Breslau, is suggested as Czerny's successor. Nearly $200,000 have been subscribed for the new cancer institute.

Beriberi Arrives at Glasgow.—The danger of the introduction of tropical diseases to other countries through the media of vessels and their crews seems to be a very real one. On December 2 two Chinamen, both firemen on board the steamer *Peleus*, which arrived in the Clyde from the Far East, via Marseilles, were discovered to be suffering from beriberi, and were removed to Belvidere Fever Hospital, Glasgow. All precautions are being taken by the sanitary authorities.

Catalogue of Ancient Medical Works.—The *Deutsche med. Wochft.* announces that the Copenhagen and the Berlin academies of science have united in publishing a catalog of all the Greek and Latin medical writings that have been handed down to us from antiquity. This catalog is to be preliminary to the suggestion that the International Association of Academies of Science undertake the task of publishing a complete scientific edition of the collected works of the physicians of antiquity. The plan is to be proposed at the next general meeting of the delegates of the association, which will be held at Vienna during the spring of 1907.

International Congress of Gynecology, St. Petersburg, September, 1906.—The committee of organization of this congress, which was postponed from last to next September, is said to be actively at work preparing for the meeting. The committee includes twenty of the most prominent gynecologists of Russia, with D. von Ott as chairman. Prof. P. Sadowski, Newski Prospekt 90, is secretary general of the congress, while Dr. Redlich has charge of the exhibition annex. His address is Spasskaja 25, both in St. Petersburg. The *St. Petersb. med. Wochft.* states that the committee requests prompt notification in regard to communications to be presented, so that summaries can be published and distributed in time. Our exchange adds, further, that trips to the Caucasus, Crimea and down the Volga will be offered the members of the congress at reduced rates. The same journal states elsewhere that Professor von Ott has been removed from the superintendency of the Gynecologic Institute at St. Petersburg, his place having been taken by Dr. Salaskin. No reasons are assigned for his removal from the famous model institution erected under his supervision.

The Austrian Society to Combat Quackery.—The program adopted by the Austrian society, whose foundation was mentioned in these columns last week, includes efforts to enlighten the people and banish superstition by popular lectures on anatomy, physiology and pathology; by replies on the spot by bright and able medical speakers when statements are made abusing science during the meetings of antivivisectionists, nature healers or other faddists; by analyses of secret remedies and publication of the results, as is being done by the Germans at some places, and by rigid enforcement of all measures tending to restrict the practice of irregulars. The president, Professor Kassowitz, emphasized the fact that quackery is constantly sapping the foundations of science and discrediting its results. The necessity for enlightening the people in this respect is well brought out by a Vienna correspondent in the *Muench. med. Wochft.* for December 5. He states that a bill appropriating less than $8,000 for public vaccination purposes in a certain district was passed by the legislature for lower Austria by a majority of only one vote. The deputies were almost evenly divided on the question of the necessity of vaccination. One asserted that if physicians were not paid for vaccinating people there would soon be plenty of testimony to the effect that vaccination does no good.

The Nobel Prizes.—Only one physician is honored with one of the Nobel prizes this year, Robert Koch. The other recipients are A. von Baeyer, Munich, an authority on organic chemistry, and P. Lesnard, of Kiel, for researches on the cathode rays. The author of "Quo Vadis," M. Sienkiewicz, receives the prize given for idealistic literature, on account of his trilogy of Polish historical novels, while the Baroness von Suttner is given the peace prize for her works and writings to promote the cause of peace. The career of Robert Koch is known to all our readers, as his name is so closely connected with modern bacteriology and serotherapy. He is not content to rest on his laurels, but is constantly seeking new worlds to conquer, having just completed a year of research in Africa. The important results of his labors were mentioned on page 1888 of our last issue. He was born in Clausthal Dec. 11, 1843. His epoch-making bacteriologic discoveries first attracted attention to him in 1876 while he was serving as district physician in Prussian Poland. After his graduation at Göttingen he served as assistant in the Hamburg Hospital and then opened an office at Langenhagen and later at Rackwitz until, in 1872, he was appointed district physician at Wollstein, near by. Here he remained until 1880, when he was summoned to Berlin as a member of the Imperial Council of Health. His discovery of the tubercle bacillus followed two years later and of the cholera bacillus the following year. He was appointed director of the newly founded Institute for Infectious Diseases at Berlin in 1891, and his announcements in regard to tuberculin laid the foundation of serotherapy not long after. His trip to Africa in 1896 added to our knowledge in regard to malaria, the immunity of adults and means of prophylaxis. The Nobel prizes were founded by the inventor of dynamite, Alfred Nobel. They amount this year to about $40,000 each. The trustees in charge of the awarding of the prizes do not seem to be aware that there is such a continent as America on the globe, but the lengthening list of the recipients of the prizes is gradually becoming a hall of fame for the great men of Europe. Germany, France, England, Spain, Switzerland, Russia, Sweden and Denmark have each been honored with one or more prizes. The physicians who have received the medicine prize to date are von Behring of Germany, Major Ross of England, Finsen of Denmark, Pawlow of Russia and Robert Koch.

LONDON LETTER.

The London Milk Supply.

Dr. Collingridge, health officer of the city of London, has made a very unfavorable report on the milk supply of the metropolis. Last year bacteriologic examination of samples of milk from 22 counties showed that only 19 out of 39 were clean and pure. Since then the investigation has been continued and samples of milk from 22 counties have been submitted to Dr. Klein for examination. He found that 15 out of 22 samples were clean and pure; 5 were unclean, and 2 contained the *Bacillus tuberculosis*. These results point to the grossest carelessness, amounting, in fact, to criminal negligence. Several guinea-pigs which were injected with the milk died from extensive pneumonia or typical septicemia, with copious presence of *Bacillus coli communis* in the blood, and in all the viscera, or acute peritonitis. One-third of the samples examined were thus unfit for use.

Bovine Typhus in Egypt.

Egypt has been officially declared free of bovine typhus and the provincial cattle markets, which have been closed for two years or more, will be reopened, provided that no fresh outbreak occurs. This disease has swept away $5,000,000 worth of cattle, and Koch, on his return from his rinderpest campaign in South Africa, was called on to advise the Egyptian government as to the means of exterminating it. He prescribed the complete isolation of diseased animals and serum inoculation. Some time after his visit to Egypt the disease seemed to increase in virulence and skeptics shook their heads with regard to his advice, but the sanitary department was in capable hands and an extensive inspectorate was established throughout Egypt and in the long run Koch's measures have prevailed. The serum institute at Abasieh is being closed, but a large quantity of rinderpest serum is being kept in cold storage for emergencies. Intelligence has just been received at Cairo that cattle plague has broken out anew in the Sudan. Serum is being dispatched from Cairo with several veterinary inspectors who can now be spared from duty in Egypt.

Distribution and Spread of Sleeping Sickness in the Congo Free State.

At the Epidemiological Society, London, Dr. J. L. Todd read an important paper on this subject, based on observations and inquiries made during a journey of 2,000 miles and a residence of two years in the Congo by himself and the late Dr. Dutton, who had been sent out by the Liverpool School of Tropical Medicine. Dr. Todd exhibited three spot maps showing the prevalence and distribution of the disease—one for 1884, when European influence was only coming into existence and sleeping sickness followed the native and Arab trade routes; a second for 1897, when the Arabs were expelled, and with the extension of long-distance transport by caravans and steamboats the disease spread in every direction, and a third for 1905, when European supremacy being fully established, and transport being easy and rapid, there was an enormous extension of the trypanosomiasis mainly from aggregation at posts along the lines of trade of native soldiers and laborers, often recruited from infected districts. The intermediate host of the *Trypanosoma gambiense* (the parasite of sleeping sickness), the *Glossina palpalis*, though not aquatic in its larval stage, prefers moist places. The areas of greatest prevalence are the river sides and shores of lakes. Frequently riverine populations show an incidence of trypanosomiasis of from 15 or 20 per cent. while the natives on higher ground escape. The chronicity of the disease is such that the parasites may be present for as long as fifteen years without producing symptoms. On the other hand, death may occur a few months after infection. The alarming spread of the sickness demands vigorous measures. In default of curative treatment Dr. Todd thinks that the only practical procedures are: 1, Establishment on the main roads leading to healthy districts of posts of inspection; 2, expulsion from healthy districts of persons having enlarged glands and their removal to infected districts; 3, control over the migration of the natives. In the diagnosis gland palpation is sufficient for practical purposes, though puncture would be required for scientific.

The Tuberculous Children of London.

At a meeting of the Invalid Children's Aid Association to discuss the action to be taken with regard to children affected or suspected to be affected with pulmonary tuberculosis, Sir William Broadbent, in an address entitled "The Tuberculous Children of the Metropolis," said that it was remarkable that while consumption, the most prevalent form of tubercular disease, has steadily diminished year by year for the last 30 years, there has been no corresponding diminution in the death rate of the tuberculous affections which are specially incident in childhood—meningitis, peritonitis, tabes mesenterica, disease of bones and joints, and scrofulous glands. On the contrary, these have increased. During the years 1901-03 in London 6,391 children under 5 died from different forms of tuberculosis; of these 2,894 died before the age of one year, the mortality decreasing rapidly with every successive year of life. The association can do little or nothing for cases of true pulmonary consumption which come under its cognizance beyond sending the children in early stages into the country. Such cases constitute a small minority of the affections of the lungs met among London children. It is astonishing what an amount of damage to the lungs is survived with apparent restoration of health and vigor. Sequels of measles, whooping cough, bronchitis and other affections are often mistaken for consumption and there are no cases in which fresh air and good food make a greater difference. A child otherwise condemned to lifelong delicacy and suffering, by a change to the country or to the seaside, may be made permanently well. The association should be encouraged to take charge of children suffering from disease of the lungs of whatever kind. In France far more attention has been paid to this question. In England an excellent beginning had been made in the Millfield Home, on the south coast near Littlehampton, for children suffering from pulmonary tuberculosis, under the control of the metropolitan asylums board. For children above the pauper class there is very little accommodation. Sir William Broadbent condemned the so-called comforter or teat, constantly seen in the mouths of infants of all classes, as an invention of the devil. It is, he said, a fraud on the unhappy child; it leads to waste of the digestive secretions, and it picks up every kind of filth when it falls on the floor. On reviewing the whole question, he said that what impresses him is the extent of the demand for institutional accommodation and the inadequacy of the provision. A resolution was carried approving of the practice of the association in endeavoring to make possible early and efficient treatment of children suffering from surgical tuberculosis by assisting to pay for them in nursing homes and special hospitals.

Pharmacology

The Press Committee of the Proprietary Association.

As a matter for publicity, we give below a list of the members of the Press Committee of the Proprietary Association. This committee is doing some very effective work in supplying to the newspapers of the country, which are willing to be dictated to, material to counteract the exposing of frauds in "patent medicines." It will be noticed that this committee represents some of the worst among the "patent medicines." What will be of special interest to physicians, however, is the fact that there are men on the committee who represent preparations that are being advertised to the medical profession through medical journals. For instance, Scott & Bowne, who, besides their "patent medicines," exploit to the public and to the medical profession "Scott's Emulsion." Wells, Richardson & Co., of "Paine's Celery Compound" fame, appeal to the medical profession to help them sell their "Cereal Milk." W. A. Talbot represents on the committee "Piso's Cure for Consumption," but who, at the same time, is with the Micajah Co., and is appealing to physicians to use "Micajah's Medicated Uterine Wafers." This is another bit of evidence to convince those not already convinced that we can not separate the so-called "patent medicines" from the "ethical proprietaries." The following is the list:

A. H. Beardsley, chairman (Dr. Miles' Nervine, etc.).
F. W. Schumacher (Peruna).
S. W. Bowne (Scott's Emulsion, Buckthorn Cordial).
H. E. Bucklin (King's New Discovery, Electric Bitters, etc.).
D. S. Chamberlain (Cough Remedy, Pain Balm, etc.)
R. R. Land (Swamp-Root Kidney, Liver and Bladder Cure, etc.).
E. C. DeWitt (Little Early Risers, Dyspepsia Cure etc.).
J. F. Hindes (Bromo-Seltzer, Rheumatic Cure, etc.).
H. B. Foley (Foley's Kidney Cure, etc.).
O. E. Foster (Doan's Kidney Pills, Burdock Blood Bitters, etc.).
W. T. Hanson (Pink Pills for Pale People, etc.).
H. L. Kramer (Cascarets, Kidney Pills, etc.).
G. A. Newmann (California Fig Syrup).
J. A. Patten (Wine of Cardui, etc.).
C. A. Rucker (Swift's Specific).
C. I. Shoop (Shoop's Restorative).
C. C. Hopkins (Liquozone).
F. A. Stuart (Dyspepsia Tablets, Absorbent Lozenges).
W. A. Talbott (Piso Cure for Consumption, etc.; also Micajah's Medicated Uterine Wafers).
G. B. Rowell (Ripan's Tabules).
J. T. Wetherald (Lydia E. Pinkham's Vegetable Compound, etc.).
G. B. Van Cleave (Paine's Celery Compound, etc.).
I. M. Clark (Laxative Bromo-Quinin Tablets, etc.).

Not Members of Proprietary Association.

Among the list of members of the Proprietary Association of America, which we published Nov. 18, was mentioned the firm of Fairchild Brothers & Foster. They write that some years ago they consented to join the association because of their interest in the matter of trademarks, but that they never took any active interest in the association or attended its meetings. They say: "Believing that our judgment was at fault in this matter, we have resigned our membership."

Opportunities for Missionary Work in China.

We wish to direct the attention of nostrum manufacturers to a recommendation made by Consul George E. Anderson of Amoy, China. Writing concerning business and professional opportunities in China, he says: "The Chinese are favorable to the patent medicine business if it can be brought within their reach. They naturally take to such a method of treating diseases, and remedies advertised as they are in the United States and Europe would have a big sale in China, provided the prices charged for them would be within the reach of the middle class." Some patent medicine men, in connection with their threats to sue certain publications which have exposed the fraudulent nature of their business, stated that these exposures have occasioned much loss of patronage; they, therefore, may need a new field in which to push the sale of their products. To judge from this report of Consul Ander-

COMPARATIVE TABLE SHOWING THE STRENGTH OF THE MORE IMPORTANT PHARMACOPEIAL SUBSTANCES AND PREPARATIONS IN THE PRECEDING AND IN THE PRESENT PHARMACOPEIA.

Title.	Chief constituent.	Pharmacopeia, 1890	Pharmacopeia, 8th revision.
Acidum sulphuricum aromaticum.	H_2SO_4, by weight	About 18.5 per cent.	About 20.0 per cent.
Aconitum.	Aconitin, by weight	Standard not fixed.	At least 0.5 per cent.
Alcohol dilutum	Absolute alcohol, by weight	About 41.0 per cent	About 41.5 per cent.
Belladonnæ folia	Mydriatic alkaloids, by weight	Standard not fixed.	At least 0.35 per cent.
Belladonnæ radix.	Mydriatic alkaloids, by weight	Standard not fixed.	At least 0.5 per cent.
Caffeina citrata effervescens	Citrated caffein, by weight	2.0 gm. in 100 gm.	4.0 gm. in 100 gm.
Cinchona.	Alkaloids, by weight	At least 2.5 per cent. quinin	At least 4 per cent ether-soluble alkaloids.
Coca.	Ether-soluble alkaloids, by weight.	Standard not fixed.	At least 0.5 per cent.
Colchici cormus	Colchicin, by weight	Standard not fixed.	At least 0.35 per cent.
Colchici semen	Colchicin, by weight	Standard not fixed.	At least 0.55 per cent.
Conium.	Coniin, by weight	Standard not fixed.	At least 0.5 per cent.
Emplastrum belladonnæ	Mydriatic alkaloids, by weight	Standard not fixed.	From 0.38 to 0.42 per cent.
Extractum belladonnæ	Mydriatic alkaloids, by weight	Standard not fixed.	0.3 per cent.
Extractum colchici cormi	Colchicin, by weight	Standard not fixed.	1.4 per cent.
Extractum hyoscyami	Mydriatic alkaloids, by weight	Standard not fixed.	1.4 per cent.
Extractum nucis vomicæ	Strychnin, by weight	15.0 per cent. total alkaloids	5.00 per cent.
Extractum opii	Morphin (cryst.), by weight	18.0 per cent.	20.00 per cent.
Extractum physostigmatis	Ether-soluble alkaloids, by weight.	Standard not fixed.	2.0 per cent.
Extractum stramonii	Mydriatic alkaloids, by weight	Standard not fixed.	1.4 per cent.
Fluidextractum aconiti	Aconitin, by weight	Standard not fixed.	0.4 gm. in 100 c.c.
Fluidextractum belladonnæ radicis	Mydriatic alkaloids, by weight	Standard not fixed.	0.5 gm. in 100 c.c.
Fluidextractum cinchonæ	Anhydrous e.-s. alkaloids, by wt.	Standard not fixed.	4.0 gm. in 100 c.c.
Fluidextractum cocæ	Ether-soluble alkaloids, by weight.	Standard not fixed.	0.5 gm. in 100 c.c.
Fluidextractum colchici seminis	Colchicin, by weight	Standard not fixed.	0.5 gm. in 100 c.c.
Fluidextractum conii	Coniin, by weight	Standard not fixed.	0.45 gm. in 100 c.c.
Fluidextractum guaranæ	Alkaloids, by weight	Standard not fixed.	3.5 gm. in 100 c.c.
Fluidextractum hydrastis	Hydrastin, by weight	Standard not fixed.	2.0 gm. in 100 c.c.
Fluidextractum hyoscyami	Mydriatic alkaloids, by weight	Standard not fixed.	0.075 gm. in 100 c.c.
Fluidextractum ipecacuanhæ	Alkaloids, by weight	Standard not fixed.	1.75 gm. in 100 c.c.
Fluidextractum nucis vomicæ	Strychnin, by weight	1.5 gm. total alkaloids in 100 c.c.	1.0 gm. in 100 c.c.
Fluidextractum pilocarpi	Alkaloids, by weight	Standard not fixed.	0.4 gm. in 100 c.c.
Fluidextractum stramonii	Mydriatic alkaloids, by weight	Standard not fixed.	0.35 gm. in 100 c.c.
Guarana	Alkaloids, by weight	Standard not fixed.	At least 3.5 per cent.
Hydrastis	Hydrastin, by weight	Standard not fixed.	At least 2.5 per cent.
Hyoscyamus	Mydriatic alkaloids, by weight	Standard not fixed.	At least 0.08 per cent.
Ipecacuanha	Alkaloids, by weight	Standard not fixed.	At least 2.0 per cent.
Jalap	Alcohol-soluble resin, by weight	12 per cent.	At least 8.0 per cent.
	Ether-soluble resin, by weight	Not more than 1.2 per cent	Not more than 1.5 per cent.
Liquor ferri chloridi	Anhydrous $FeCl_3$, by weight	37.8 per cent.	29.0 per cent.
Liquor ferri et ammonii acetatis.	Tincture of ferric chlorid	2 c.c. in 100 c.c.	4 c.c. in 100 c.c.
Liquor ferri tersulphatis	$Fe_2(SO_4)_3$, by weight	28.7 per cent.	36.0 per cent.
Lithii citras effervescens	Lithium citrate, by weight	About 17.0 per cent.	About 5.0 per cent.
Nux vomica	Strychnin, by weight	Standard not fixed.	At least 1.25 per cent.
Oleatum hydrargyri	Yellow mercuric oxid, by weight.	20.0 per cent.	25.0 per cent.
Oleum amygdalæ amaræ	Benzaldehyd, by weight	Standard not fixed.	At least 85 per cent.
	Hydrocyanic acid, by weight	Standard not fixed.	2 to 4 per cent.
Oleum cajuputi	Cineol, by volume	Standard not fixed.	At least 55 per cent.
Oleum caryophylli	Eugenol, by volume	Standard not fixed.	At least 80 per cent.
Oleum cinnamomi	Cinnamic aldehyd, by volume	Standard not fixed.	At least 75 per cent.
Oleum eucalypti	Cineol, by volume	Standard not fixed.	At least 50 per cent.
Oleum limonis	Citral, by weight	Standard not fixed.	At least 4 per cent.
Oleum menthæ piperitæ	Menthyl acetate, by weight	Standard not fixed.	At least 8 per cent.
	Total menthol, by weight	Standard not fixed.	At least 50 per cent.
Oleum pimentæ	Eugenol, by volume	Standard not fixed.	At least 65 per cent.
Oleum rosmarini	Bornyl acetate, by weight	Standard not fixed.	At least 5 per cent.
	Total borneol, by weight	Standard not fixed.	At least 15 per cent.
Oleum santali	Santalol, by weight	Standard not fixed.	At least 90 per cent.
Oleum thymi	Phenols, by volume	Standard not fixed.	At least 20 per cent.
Opii pulvis	Morphin (cryst.), by weight	13 to 15 per cent	12 to 12.5 per cent.
Opium deodoratum	Morphin (cryst.), by weight	13 to 15 per cent	12 to 12.5 per cent.
Physostigma	Ether-soluble alkaloids, by weight.	Standard not fixed.	At least 0.15 per cent.
Pilocarpus	Alkaloids, by weight	Standard not fixed.	At least 0.5 per cent.
Potassii citras effervescens	Potassium citrate, by weight.	About 48.0 per cent	About 20.0 per cent.
Stramonium	Mydriatic alkaloids, by weight.	Standard not fixed.	At least 0.35 per cent.
Suppositoria glycerini	Glycerin (half their former size).	6 gm. each	3 gm. each.
Syrupus ferri iodidi	Ferrous iodid, by weight	About 10 per cent.	About 5 per cent.
Tinctura aconiti	Aconitin, by weight	Standard not fixed.	0.045 gm. in 100 c.c.
	Aconite	1 gm. in 2.85 c.c.	1 gm. in 10.0 c.c.
Tinctura belladonnæ foliorum	Mydriatic alkaloids, by weight	Standard not fixed.	0.035 gm. in 100 c.c.
	Belladonna leaves	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
Tinctura benzoini composita	Benzoin	1 gm. in 8.33 c.c.	1 gm. in 10.0 c.c.
Tinctura cannabis Indicæ	Indian cannabis	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
Tinctura cantharidis	Cantharides	1 gm. in 20.0 c.c.	1 gm. in 10.0 c.c.
Tinctura capsici	Capsicum	1 gm. in 20.0 c.c.	1 gm. in 10.0 c.c.
Tinctura cardamomi	Cardamom	1 gm. in 10.0 c.c.	1 gm. in 5.0 c.c.
Tinctura cinnamomi	Saigon cinnamon	1 gm. in 10.0 c.c.	1 gm. in 5.0 c.c.
Tinctura colchici seminis	Colchicum seed	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
	Colchicin, by weight	Standard not fixed.	0.05 gm. in 100 c.c.
Tinctura digitalis	Digitalis	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
Tinctura ferri chloridi	Anhydrous $FeCl_3$, by weight	13.6 per cent., by weight	13.28 per cent., by weight.
Tinctura gambir composita	Gambir	1 gm. in 10.0 c.c.	1 gm. in 20.0 c.c.
Tinctura gelsemii	Gelsemium	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
Tinctura hydrastis	Hydrastin, by weight	Standard not fixed.	0.4 gm. in 100 c.c.
Tinctura hyoscyami	Mydriatic alkaloids, by weight	Standard not fixed.	0.007 gm. in 100 c.c.
	Hyoscyamus	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
Tinctura kino	Kino	1 gm. in 10.0 c.c.	1 gm. in 20.0 c.c.
Tinctura lobeliæ	Lobelia	1 gm. in 5.0 c.c.	1 gm. in 10.0 c.c.
Tinctura nucis vomicæ	Strychnin, by weight	0.3 gm. total alkaloids in 100 c.c.	0.1 gm. strycvhnin in 100 c.c.
Tinctura opii	Morphin (cryst.), by weight	1.3 to 1.5 gm. in 100 c.c.	1.2 to 1.25 gm. in 100 c.c.
Tinctura opii deodorati	Morphin (cryst.), by weight	1.3 to 1.5 gm. in 100 c.c.	1.2 to 1.25 gm. in 100 c.c.
Tinctura physostigmatis	Physostigma	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
	Ether soluble alkaloids, by weight.	Standard not fixed.	0.014 gm., in 100 c.c.
Tinctura quassiæ	Quassia	1 gm. in 10.0 c.c.	1 gm. in 5.0 c.c.
Tinctura rhei	Rhubarb	1 gm. in 10.0 c.c.	1 gm. in 5.0 c.c.
Tinctura sanguinariæ	Sanguinaria	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
Tinctura scillæ	Squill	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
Tinctura stramonii	Stramonium	1 gm. in 6.67 c.c.	1 gm. in 10.0 c.c.
	Mydriatic alkaloids, by weight.	Standard not fixed.	0.03 gm. in 100 c.c.
Tinctura strophanthi	Strophanthus	1 gm. in 20.0 c.c.	1 gm. in 10.0 c.c.
Tinctura tolutana	Balsam of tolu	1 gm. in 10.0 c.c.	1 gm. in 5.0 c.c.
Tinctura veratri	Veratrum	1 gm. in 2.5 c.c.	1 gm. in 10.0 c.c.
Trochisci cubebæ	Oleoresin of cubeb, by weight	0.25 gm. in each	0.125 gm. in each.
Unguentum chrysarobini	Chrysarobin, by weight	About 5.0 per cent.	About 6.0 per cent.
Unguentum phenolis	Phenol, by weight	About 5.0 per cent.	About 3.0 per cent.
Unguentum sulphuris	Washed sulphur, by weight	About 30.0 per cent.	About 15.0 per cent.

son, China would be a magnificent opening for them. It would also be a great benefit to China, for are not patent medicines valuable remedies, and is it not cruel to deprive any people of them? By all means, let the patent medicine men work the Chinese for a while, if that long-suffering people will stand for it.

An Early Patent Medicine Fraud.

According to a correspondent of the New York *Evening Post*, probably the earliest instance of drastic "treatment" of the patent-medicine fraud in this country is recorded in "The New England Chronology," Part II, 2 (1,754), of the Rev. T. Prince (Arber's English Garner, ii, 577-578):

"March 4 (1631). First Court of Assistants this year, at Boston. Present, Governor, Deputy Governor, Sir R. Saltonstall, Master Ludlow, Captain Endicot, Masters Pynchon, Novell, Sharp, Coddington, Bradstreet.

"Ordered. . . . A man fined £5, for taking upon him to cure a scurvy, by a 'Water' of no value; which he sold at a very dear rate; to be imprisoned till he pay his fine, or give security for it; or else be whipt. And shall be liable to any man's action, of whom he has received money for the said 'Water.'"—*American Medicine*, Nov. 18, 1905.

Will Help Honest Advertising.

Those who are a bit nervous over the exposure of the patent-medicine industry by popular magazines should remember that the campaign is directed chiefly against mendacious patent-medicine advertising. Surely no fault can be found with a crusade against lying advertisements. If it were possible to eliminate falsehood from all advertising it would be the best thing that ever happened to the honest advertiser. Today the man who sticks to the plain truth in his advertisements suffers from the monumental prevarication of less conscientious advertisers who have deceived the public so much that it liberally discounts the utterances of all advertisers except in those isolated cases where experience has shown that one may be believed. Good honest advertising will sell a good honest medicine, and if it doesn't the fault is not with the advertising.

The above is from the *New Idea*, the house organ of Frederick Stearns & Co. What is said here in regard to "patent medicines" applies exactly to proprietaries advertised to physicians. It is the lying, the absurdly extravagant claims, the false statements regarding both the composition and the therapeutic action of the articles, that has brought all proprietaries into disrepute among many physicians. Of course, if the whole truth were written about many proprietaries, it would spell humbug, but there are plenty of valuable proprietaries which would win favor if the straight honest truth were told about them.

Practical Work Outlined by Chicago Medical Society.

At the regular monthly meeting, held December 12, the Council of the Chicago Medical Society unanimously adopted the following resolutions:

1. That every branch of the society be requested to set aside an evening for the discussion of this question and particularly to encourage the members to report data in regard to cases observed which were injured or killed by the use of patent medicines.
2. That the secretaries of the branch societies be requested to send this material to the Public Relations Committee.
3. That the council appoint a committee to prepare articles on this subject for the lay press; this committee also to prepare and supply the lay press with other matter on this same subject for publication.
4. That THE JOURNAL of the American Medical Association be requested to prepare reprints of the articles on proprietary medicines and of the articles in *Collier's Weekly*, and that the society should set aside sufficient funds to furnish each doctor in the county with a copy of these reprints.
5. To have run in the *Bulletin* a request for the data of cases observed by the members of the society, who have been or may be injured by the use of patent medicines.
6. That a committee be appointed to see if the *Daily News* will accept a lecture on the patent medicine question to be inserted in their lecture column.
7. To communicate with the president of the state society in regard to above suggestions, and such others as may be made by the council, and request him to communicate with the various county societies and request them to encourage the same work.

Southwestern Branch Indorses Movement.

On account of the numerous and rapidly increasing number of worthless and harmful preparations that are being exploited among the physicians of the land, be it

Resolved, That the Southwestern Branch of the Chicago Medical Society expresses its hearty approval of the action of the American Medical Association in establishing a Council on Pharmacy and Chemistry to investigate non-official drugs and medicinal preparations. It also approves the action of THE JOURNAL of the American Medical Association in its campaign of educating the medical profession concerning the evils of nostrums and urges it to continue in the good work. It also heartily commends the action of *Collier's Weekly* and *Ladies' Home Journal* in exposing the evils of patent medicines, and be it also.

Resolved, That each member of this society be requested to write to the editors of these publications commending the action they have taken in the matter, and also that a copy of these resolutions be spread on the minutes of the society and that copies be forwarded to the secretary of the Chicago Medical Society, editor of THE JOURNAL of the American Medical Association, *Collier's Weekly* and *Ladies' Home Journal*. C. HUBART LOVEWELL, Secretary.

Resolutions Indorsing the Fight Against Nostrums.

At a recent meeting, the Lackawanna County (Pa.) Medical Society passed resolutions commending the work of *Collier's Weekly* and of the *Ladies' Home Journal* in their campaign against "patent medicines." At its December meeting, the Shiawasse County (Mich.) Medical Society adopted resolutions indorsing the action of THE JOURNAL A. M. A., *Collier's Weekly*, and the *Ladies' Home Journal* in exposing the methods of the Proprietary Association.

As Collier's Sees It.

BEWARE
OF
ACETANILID

The following well-known "remedies," both "ethical" and "patent," depend for their results upon the heart-depressing action of Acetanilid:

Orangeine	Megrimine	Ammonol
Bromo-Seltzer	Anti-Headache	Salacetin
Royal Pain Powders	Dr. Davis's Headache Powders	Phenalgin
Miniature Headache Powders	Antikamnia	Cephalgin

and practically all of the drug-store-vended "headache cures" and "anti-pain" remedies.

Take no nostrum of this class without a doctor's prescription, unless you are sure it contains no acetanilid. Make the druggist tell you. He is responsible. A suit for damages has recently been won against a New York drug store for illness consequent upon the sale of a "guaranteed harmless" headache tablet containing three grains of acetanilid.

[The above is from *Collier's Weekly*. It is certainly unkind to mix such ethical and well-established compounds as antikamnia, salacetin, phenalgin and ammonol with common every-day "patent medicines," as is done in this instance!]

New Chemical Remedies in Switzerland.

The Swiss Association of Pharmacists has recently passed, at its general meeting, what seems to us a timely and beneficial resolution. It recommends that each manufacturer be compelled to publish on the label of each pharmaceutic product the following points: First, its chemical name, as well as its commercial denomination; second, its reactions (of identity), its melting or boiling point, and its solubility in ordinary solvents; third, its dosage. There are already so many comparatively new chemical remedies and they are being added to so frequently and constantly that pharmacists can not be posted as to their physical characteristics and their properties, hence they can not, without the information above mentioned, exercise the proper control as to their purity or their safe administration.—Editorial in *New Orleans Medical and Surgical Journal*.

Not Under the Red Clause.

We have before urged that newspapers, as a rule, even to the extent of self-sacrifice, would come out on the side of right if the facts were placed before the editors in a way to show them what is right. It has been surprising to those who have watched the trend of affairs since the publication of *Collier's* article on the "Patent Medicine Conspiracy Against the Freedom of the Press" to note that the Press Committee of the Proprietary Association has not been able to control all of the newspapers. On the other hand, a large number have come out boldly and have sided with the public in this propaganda against frauds in "patent medicines." Every day fresh evidence of this is coming to our attention. We know it to be a fact, also, that many newspapers that have not come out openly on either side have refused to use matter supplied them by the Press Committee of the Proprietary Association. The following are samples of editorial comments in the newspapers:

The *Lincoln Trade Review*, December 2, says: "There is no graft in operation to-day that reaches so deeply into the pocketbooks of individuals and gives absolutely so little in return as the sale of numerous 'patent medicines' which prove, on examination, to be unmitigated frauds of the first water. One of the regrettable things in this connection is the way they are advertised and the part that newspapers play in duping the public by publishing the remarkable statements of cures that these frauds are alleged to make."

The *Seattle* (Wash.) *Star* makes the following manly announcement:

"Eleven different patent medicines, which have been regularly advertised in the columns of the *Seattle Star*, will no longer be accorded space in this newspaper. . . .

All advertising arrangements made by this paper are subject to editorial control. The editor can determine what matter offered by advertisers is fit to print and what is not fit to print.

The *Star's* editor has determined that objectionable matter lies in most patent medicine ads. and that they are therefore subject to refusal.

The *Star* desires to be consistent in its crusade against patent medicines as a class. It does not seem right for the paper to accept profits from advertisements of articles which it denounces editorially, and which it believes should not be sold to the people.

The fact that there is considerable pecuniary loss involved as a result of the elimination of these ads. can not be considered for a moment.

This is certainly clear cut, and the editor has taken a firm stand. He further says that the *Star* does not claim to be able to protect the people against all sorts of fakes, but he considers it his simple duty to take the stand here outlined because the line between right and wrong appears to him so clearly drawn.

Correspondence

The Removal of Liquor from the Army Canteen.

PUEBLO, COLO., Dec. 14, 1905.

To the Editor:—In a recent issue of the *Medical Record*, the editor takes up the question of the army canteen. The argument advanced is the same old story. The editor of the *Record*, as a scientific man, should be more exact in some of his statements. Congress did not pass an act closing the canteens; the act prevented only the sale of liquor in military reservations, etc. The store department, the post exchange, the reading room, the recreation room, remain the same.

I have seen something of the army life in the Orient, and I wish to say, as a physician and a citizen, that every boy in the army is infinitely better off without the beer halls than with them. It is true, some men will go to outside saloons for their drinks, but they will not go so often and they will not drink as much when they have to go from one to three miles as if they could get it in the camp. Then, too, it helps to save the enlisted man who has not begun to drink. It gives him a much better chance to let it alone when there is none to be found in the army canteen.

There are other causes for desertion, and many of them, apart from those given by the *Record*.

The following statement is made by Gen. Noel Gaines, an old army officer:

"The truth is, the inability of the soldiers easily to obtain liquor is not the cause of the increased desertions and poor discipline and ill-content of the men; but rather the low standard of morals of men and officers, growing out of drinking intoxicating liquors in any form, whereby their morality, sense of honor and patriotism are gradually destroyed; coupled with the tyrannical treatment of the enlisted men (all of whom are Americans and will not tolerate tyranny) by almost the whole of the younger officers of the army, and a great many of the older ones, are real causes. I testify to this from personal observation."

Lieut. Gen. Nelson A. Miles, just two years ago, after almost three years' trial of the prohibition of liquor in army reservations, had this to say:

"For a long times the army has been without what is known as the liquor feature of the canteen. The army posts are much better off without it, I find. That element having once been discarded it would be an injury and a step backward to reintroduce it.

"The canteen, so-called, is a recreation room or building established or set apart at nearly all military posts. It is for the comfort of the enlisted men.

"It includes the recreation room which gives the men opportunity for social intercourse, the playing of games and the reading of magazines and books. It also affords them light refreshment of various kinds which they may desire in addition to the good, wholesome food furnished by the government.

"There are certain men in the service, as in every community, who will have liquor if it is possible to obtain it. Of course these are not the best men in the ranks.

"But now that liquor has been removed from the military reservations those not addicted to the use of liquor are free from its demoralizing influences. The temptation to use it is made very remote.

"Besides, the amusements rooms where the men who desire may study or read or have orderly recreation are not disturbed by men wholly or partly under the influence of liquor. In other words, the canteen is made inviting to decent, self-respecting men.

"I have visited many posts during the past year, and I know that the conditions are better now than ever before. This I say positively from my own observation.

"At one large post in the West the present canteen is so well conducted and so well patronized that it has paid dividends of $1 a month to every man. This shows that the argument that the canteen can not be sustained without the liquor feature is wholly false.

"'Do you think, General, that there is less drunkenness among the soldiers than existed when the canteen had the liquor feature?'

"'I know there is less,'" was General Miles' emphatic reply.—*Boston Advertiser*, Dec. 12, 1903.

It is time for sensible men, and especially physicians, to give up the fallacy that soldiers must get drunk. I have seen army officers passing through hostile territory so drunk that a sudden attack could have ended in nothing but defeat. Boys who enlist in the army because they can get liquor are poor defenders of their country, and, if they leave the army because they can not get it, it is small loss.

Lord Kitchener, in the campaign of the Soudan, abolished liquor of all kinds, even from the officers' mess. Their liquid refreshments were confined to tea and oatmeal water. This was on no temperance grounds, but because he knew the powers of endurance could be maintained without liquor better than with it. His forced marches over burning sand and his victory of Omdurman proved his conclusions correct. Japan has recently shown the world the advantage of a sober army. A. S. Barker has this to say of excluding wines and beers from ship canteens:

"The navy is to be congratulated that the department has remained firm in excluding wine and beer from the canteen of ships.

"Railroad companies do not employ men who drink intoxicating liquor because of the increased danger of accidents and consequent claims for damages.

"Manufacturing concerns are yearly becoming more strict in this regard. How much greater the necessity for absolute sobriety on a battleship? Tons of explosives are confined in the vessel, fires burn with intense heat in the furnaces, electricity is generated in currents of sufficient strength to run 1,000 lamps and move turrets weighing hundreds of tons, while within the ship closely housed over this dormant hell are more than 700 human beings.

"The majority of enlisted men come from good homes and are temperate. Is it therefore not better to weed out the few intemperate and raise the standard still higher than to disgust many self-respecting men and lower the tone of the service?

"A. S. BARKER,
"Rear Admiral, U. S. Navy.
"Commander-in-Chief North Atlantic Fleet."

One of the inconsistencies, in which those who want to place the beer halls back in the army camps indulge, is this: They say: Drunkenness has increased; desertion has decreased. Yet, in the same article, they will go on to tell us that men are leaving the army because they can not get liquor. The fallacy is evident. Beer and cigarettes are not the rations of any great football team, and every physician knows that they are equally poor for fighting men.

Let some army officers try as hard to keep the boys from drinking, both by precept and example, as they do now to restore liquor to the army canteens, and we will hear less about the need of it. The result of no beer saloons in the navy is attracting to our navy a better class of men. On one ship alone, in the paymaster's safe, there is over $33,000 saved by the men on board. This does not occur on board beer-hall ships. According to the official report of the U. S. Navy, the

health of the men is better and the death rate less. There are no medical reasons for returning to the old régime in either army or navy. JOHN INGLIS.

The Burning of the Books.

SOUTH HAVEN, MICH., Dec. 18, 1905.

To the Editor:—I have just read the letter of Dr. B. Holmes in THE JOURNAL of Dec. 16 on the "Burning of Books," and I must enter a protest against such wholesale denunciation of all medical books older than the last edition. To my mind, the fathers in medicine, be they old or new, deserve not only our respect, but their teachings and their books are worthy of our serious thought and study. There is something more due them and ourselves than—

"As dutious sons we fondly wished
Our fathers were more wise."

Truth is not always most abundant in things ultra new. There is no greater danger of falling into error by going slow than by going too fast.

The same desire of the public which demands two editions of a daily paper, with extras between, seems to consume some medical men, and they court and receive the distinction of being on the crest of the wave of "the very latest." The public may applaud and flock to them, but it does not follow that their patients are cured or helped by them more than by the more conservative practitioner. There are fads and fancies in things medical, as well as in other lines of human activity. It is the mad desire for something new that drives men to follow after such strange gods as osteopathy, Eddyism, and their like.

The man in general practice can not and should not attempt to keep abreast with the man in the laboratory devoting himself to experimental and original research work.

Fifty thousand of the "60,000 physicians" spoken of by Dr. Holmes can not buy the last editions of all needed medical text-books, nor is it necessary, in my humble opinion, that they should do so in order to be up with the times in their work. Nor do they need to burn or even to discard all save the last editions.

It is often astonishing how little "revising" is required for an excuse for a "new edition." The changes more often consist of an increased number of "plates" rather than new or revised ideas.

Let not the physician be ashamed to have good standard medical books on his shelves, though part of them, at least, be not the very last revision.

The man who subscribes for and faithfully reads a few good current medical journals need not fear that his patients will suffer for lack of modern treatment, even if some of his text-books are two or ever ten years old. L. G. RHODES, M.D.

Roentgen Rays in Dentistry.

CHICAGO, Dec. 18, 1905.

To the Editor:—In reference to the article with the above title by Dr. Kassabian in the issue of December 16, permit me to make a few remarks about the technic employed, which, I think, will be of value to every Roentgenologist. As to the material used, I find heavily coated celluloid paper the ideal material for such work. I cut pieces 2 x 3 cm., inclose them in oiled paper, and cover them with black paper, the smooth side of the cover corresponding with the emulsion side of the film.

I place the patient on a table and, according to the advice of Albers-Schonberg (*Die Roentgentechnik*, Hamberg, 1903), either let the patient adduct his chin as near as possible to his chest (upper jaw) or bend it as far as possible backward (lower jaw). By this position it is much easier to direct the rays as nearly perpendicular as possible to the film, and a distortion will never occur. The film is then inserted, held in place by an assistant or the patient himself, the point of pressure being, of course, as Dr. Kassabian says, on the particular tooth to be Roentgenographed. The results I have thus obtained are most satisfactory. This same method is used, also, in locating stones in the salivary ducts, the film being inserted over the tongue, the head held backward at right angle to the spinal column and the rays directed perpendicular to the floor of the mouth. I reserve the extra-oral Roentgenography of teeth for the third molar only, and then use a very small lead diaphragm, which helps me greatly in getting a perfect picture of the tooth. MAX REICHMANN, M.D.

The Nomenclature of Proprietary Medicines.

NEW YORK, Dec. 11, 1905.

To the Editor:—Your issue of December 9 contains an article by Prof. C. S. N. Hallberg on the above subject, from which we quote the following:

> And yet, in the face of this undeniable awakening of medical men, a firm of chemists of the highest standing has recently devised the meaningless, empiric names for three articles of its manufacture: Duotonol tablets, quartonol tablets, sextonol tablets. "Tonol" stands for glycerophosphates, and the prefixes refer to one number of different kinds of glycerophosphates, salts of alkalies, contained in each tablet. Now these names have been devised on the assumption that physicians will appreciate them, owing to their brevity and euphony; on the other hand, it is evident that these names will not appeal to the thinking physicians, as they would under the pharmaceutical titles, with the name of the illustrious founder of the firm as the trademark.

We beg leave to state here the considerations which led us to the adoption of the names challenged by your distinguished contributor:

We were the original introducers of the glycerophosphates in this country and extensively advertised them among the medical profession during the past decade. But soon after these salts had met with a favorable reception they were also marketed by other firms. The latter were able to undersell us because they had had none of the enormous costs and risks connected with the introduction, and, besides, some of the competitive preparations had shortcomings in purity and stability.

After advertising these salts as "glycerophosphates-Schering" for eight years—as Prof. Hallberg advises—we were in self-protection forced to adopt the trademark "tonol." The physician, by using this short and easily-remembered name, was thereby enabled to assure the dispensing of Schering's glycerophosphates.

The name "duotonol" was given to the lime-soda combination, "quartonol" to the tablet containing four salts, and "sextonol" to the one of six salts. It would hardly have been possible to devise names less subject to confusion. If the combinations had been designated "No. 1," "No. 2" and "No. 3," many physicians would have been unable to recall, when prescribing, which of the three numbers represented the tablet desired. And "Schering's tablets of glycerophosphates of lime, sodium, iron, manganese, quinin and strychnin" (instead of sextonol) would have presented equally great mnemonic difficulties. But in addition we always state in our advertisements, our literature, and on the labels of the packages, the name of Schering in connection with the formulas.

We are confident that the tradenames will recommend themselves by their precision and convenience, and indeed, we already possess proof of this fact.

While we regretfully recognize the fact that there is a multiplicity of brands of proprietary medicines, the same is true of all pharmaceuticals; the druggist often has to keep in stock several brands of morphin, quinin, etc. In the case of proprietary preparations, however, the remedy is obvious, if the physician will specify the original product, whose manufacturer deserves the reward of his labors and who may be relied on to supply the product of highest quality. If the physician leaves the selection of the brand to the pharmacist, cheapness —not quality—will often determine whose product is selected, and the cheapest is most likely the poorest one.

SCHERING & GLATZ.

Infant Consultations.

PHILADELPHIA, Dec. 1, 1905.

To the Editor:—Reading your notice of the Congress of "Gouttes de Lait," I would like to call your attention to the fact that there has been started in Philadelphia within the last two months a little hospital under the name of The Christ's Hospital, whose work is the same as those European stations. The purpose of the clinics is to allow mothers to bring their babies to have their diet, hygiene and general care supervised by competent medical men. The question of milk supply is a vital one, and advice to the mothers on milk mixtures is very important. You note on p. 1747 that some of these stations do not survive; it requires an infinite patience to deal with some

of the more ignorant mothers. Many of them have been brought up in a mill, and have faint ideas about housekeeping. They do not know how to make the best of their limited resources. The proportion of waste and needless expenditure among the poor is apt to be greater than among the *gens doré* of our social structure.

This work in Philadelphia is called by the name of child registration and, although just begun, seems to have a future. At other hours there are clinics for the treatment of diseases of children, but the hour of registration is strictly one for normal study. Valuable statistics of height, weight, nutrition, and general development will be obtained, and in the changes of childhood there is the chance to know better how adult processes become initiated. The address of the hospital is 3354 North Front street, where any correspondence with those interested will be welcome.

The institution has its finances guaranteed by the St. Ambrose P. E. Mission and the Providence M. E. Church, as well as by public-spirited individuals of the neighborhood. It seems a very relevant work for religious bodies to assist, and in the future it may be that more of this charity will find issue in their activities. T. H. EVANS, M.D.

Marriages

ARTHUR K. HAMMOND, M.D., to Mrs. Keller, both of Fort Wayne, Ind.

JAROS F. ZIVNUSKA, M.D., to Miss Flora A. Salentine, both of Milwaukee, Wis.

RALPH BUTLER, M.D., to Mrs. John E. Shaw, both of Philadelphia, December 18.

S. BASKIN SHERARD, M.D., Iva, S. C., to Miss Mattie Moson, at Baltimore, December 5.

JOHN H. MCCUTCHAN, M.D., to Miss Maude Earle, both of Evansville, Ind., December 6.

ALEXANDER S. SIM, M.D., to Miss Lorna Lucy Lyons, both of Brooklyn, N. Y., December 7.

MOSES EISENSTAEDT, M.D., to Miss Blanche Janet Benjamin, both of Chicago, December 18.

MERLE FLENNER, M.D., Hamilton, Ohio, to Miss Adrienne Nosler of Chicago, December 12.

DEROSTUS E. SMITH, M.D., to Miss May Milehan, both of Kansas City, Kan., December 6.

JOHN L. SEAY, M.D., Sumterville, Ala., to Miss Lizzie Clark of Pratt City, Ala., December 5.

WALTER S. WING, M.D., to Miss Laura Casper, both of Oconomowoc, Wis., November 29.

LIVINGSTON L. SHROPSHIRE, M.D., to Miss Agnes James, both of San Antonio, Texas, November 27.

EUGENE G. HOLDEN, M.D., Caldwell, Idaho, to Miss Ethel Kuppinger of Erie, Colo., December 6.

GEORGE INGLES MACLEOD, M.D., Ardmore, Pa., to Miss Madge Twiggs of Augusta, Ga., December 17.

GEORGE M. SHAW, M.D., Robinsonville, Miss., to Miss Lulu Rhea of Somerville, Tenn., December 6.

JOHN J. TRAVIS, M.D., Northport, Wash., to Miss Alice J. Bowes of Spokane, Wash., November 23.

CHARLES H. ZORGER, M.D., Ivesdale, Ill., to Miss Anna Cecilia Sunderland of Urbana, Ill., November 28.

JOHN CRAYKE SIMPSON, M.D., to Miss Louise Kauffmann, both of Washington, D. C., December 12.

J. AUSTIN THOMPSON, M.D., to Mrs. Allie McCreedy, both of Letts, at Washington, Iowa, November 29.

SAMUEL H. HEAVRIN, M.D., Louisville, Ky., to Miss Stella Rothschild of Owensboro, Ky., December 6.

SAMUEL T. GLASFORD, M.D., to Miss Marie Clark, both of Danvers, Ill., at Peoria, Ill., November 29.

ARNE A. STEMSRUD, M.D., Dawson, Minn., to Miss Minnie Lindell of Grove City, Minn., November 29.

HARRY G. TEMPLETON, M.D., Plymouth, Pa., to Miss Anna Blanchard of Wilkesbarre, Pa., November 26.

JOSEPH HENRY DELANEY, M.D., Bozeman, Mont., to Miss Nina Howell White of Hobgood, N. C., December 19.

ERNEST RAY LIMBOCKER, M.D., New Virginia, Iowa, to Miss Gertrude Vera Salber of Clarinda, Iowa, November 30.

ALBERT F. ZIMMERMANN, M.D., Santa Ynez, Cal., to Miss Virginia Claire Bradley of Los Angeles, Cal., November 29.

EUGENE BYRON GLENN, M.D., Asheville, N. C., to Miss Elizabeth Elliott Lumpkin of Columbia, S. C., December 21.

ALBERT LIVINGSTON STAVELY, M.D., Washington, D. C., to Miss Willie Browning Haralson of Montgomery, Ala., December 6.

Deaths

William S. Forbes, M.D. Jefferson Medical College, Philadelphia, 1852, died suddenly at his home in Philadelphia, from angina pectoris, December 17, aged 74. Dr. Forbes served for one year as assistant surgeon in the English service during the Crimean War. He also served as resident physician in the Pennsylvania Hospital, and later taught private classes in surgery and anatomy in the College of Anatomy, Philadelphia. He was a member of the Academy of Natural Sciences, College of Physicians of Philadelphia, Philadelphia County Medical Society, Medical Society of the State of Pennsylvania, and American Surgical Association. He served throughout the Civil War as surgeon in the United States Volunteers, was appointed medical director of the Thirteenth Army Corps and served under General Grant during the siege of Vicksburg. He was surgeon to the Episcopal Hospital for 25 years, and also surgeon to the Jefferson Medical College Hospital. In 1879 he was made demonstrator of anatomy in Jefferson Medical College, and in 1886, he was appointed professor of anatomy, and held that chair until his death. Perhaps the crowning act of Dr. Forbes' life and the deed of which he was most proud was his authorship of the original Anatomy Act of Pennsylvania in 1863, and its amendment in 1883. This act has placed the procuring of subjects for dissection in the various medical schools in Pennsylvania on a legal basis, and has been of the greatest aid in the advancement of medical science. This act is the prototype and has been copied by all of the states in the union. He was the inventor of a new lithotrite and method of obtaining and measuring the strength of these instruments and the measured crushing resistance of vesical calculi, blood from the arteries to the veins, "Per Perositates," and an article on the diaphragm as a protector of the heart, and its influence in changing the current of blood, at birth, from the ductus arteriosus, to the lungs, by compressing the ductus arteriosus until the lumen of the duct is obliterated. He devised and was the first to perform the operation of liberating the ring finger of musicians by dividing the accessory tendons of the common extensor of the digits. At the 1905 commencement exercises of Jefferson Medical College a life-size portrait of Dr. Forbes was presented to the board of trustees of the college by the students and alumni. At the same time the Alumni Association of the University of Pennsylvania presented him with a silver loving-cup in recognition of his services in securing the establishment of the present state anatomic law. Dr. Forbes was an eloquent and sincere teacher and loved by all students who came in contact with him. He was known by the students in Jefferson as "the grand old man."

WILLIAM S. FORBES, M.D.

George Warner Miltenberger, M.D. University of Maryland School of Medicine, Baltimore, 1840; demonstrator of anatomy in that institution from 1840 to 1847; lecturer on pathology from 1847 to 1852; professor of materia medica and pathologic anatomy from 1852 to 1858; professor of obstetrics from 1858 to 1891; dean of the faculty from 1855 to 1869; emeritus professor of obstetrics and honorary president of the faculty of his alma mater since 1891; president of the Baltimore Obstetrical and Gynecological Society in 1885-1886, and of the Medical and Chirurgical Faculty of Maryland 1886-1887; consulting physician to Johns Hopkins Hospital; one of the oldest and

most highly esteemed practitioners of Baltimore, died at his home in that city from senile debility, December 11, aged 86. In 1896 his portrait was presented to the Medical and Chirurgical Faculty of Maryland. He led a strenuous professional life, and gave to the University of Maryland the best of his life and service.

George S. Hyde, M.D. Harvard University Medical School, Boston, 1856; a member of the American Medical Association, Massachusetts Medical Society, Suffolk District Society and Harvard Medical Alumni Association; interne at the Massachusetts General Hospital; a practitioner of Boston for half a century; for 40 years physician to St. Vincent's Orphan Asylum; prominent in all charitable work, died at his home in Boston, December 11, aged 74.

John F. Failing, M.D. University of Buffalo (N. Y.) Medical Department, 1868; a veteran of the Civil War, in which he served as hospital steward of the One Hundred and Twenty-eighth New York Volunteer Infantry, and formerly a practitioner of Grand Rapids, Mich., died at his home in Los Angeles, Cal., December 6, from tuberculosis, after an illness of ten years, aged 64.

Thomas Benjamin Hunt, M.D. University of Louisville Medical Department, 1864; for nine years a member of the board of education of Warsaw, Ill.; once a member of the State Board of Health; surgeon of the Fifty-fourth Kentucky Mounted Volunteer Infantry, died at his home in Warsaw, November 17, from heart disease, after a short illness, aged 74.

Benjamin Blackford, M.D. Jefferson Medical College, Philadelphia, 1855; surgeon in the Confederate service during the Civil War; in charge of hospitals at Front Royal and Liberty, Va.; an alienist of ability; for 16 years superintendent of the Western State Hospital, Staunton, Va., died at his residence in that institution, December 13, from pneumonia, aged 71.

Evelyn Lyman Bissell, M.D. Medical Institution of Yale College, New Haven, Conn., 1860; surgeon in the Army during the Civil War; a member of the staff of Governor Waller; president of the New Haven board of health, died suddenly at his home in New Haven, from cerebral hemorrhage, December 9, aged 69.

William Henry Harrell, M.D. Medical College of Virginia, Richmond, 1885; for 16 years physician and superintendent of health of Martin County, N. C., and for several years a member of the State Board of Health, died at his home in Williamston, November 27, from pneumonia, after an illness of six days.

Edwin Reynolds, M.D. College of Physicians and Surgeons in the City of New York, 1877; member of the New York State Medical Association, New York State Medical Society, and Medicolegal Society; physician to the Brooklyn Home for Consumptives, died at his home in Brooklyn, December 15, aged 59.

Cassius M. Colegrove, M.D. College of Physicians and Surgeons, Baltimore, 1883; twice president of the village of Canastota, N. Y., died December 9 from injuries received the evening before by being caught between a train from which he had alighted and a freight train, at Canastota, aged 43.

Theodore Deecke, M.D. University of Berlin, Germany, 1857; for 17 years pathologist at the Utica (N. Y.) State Hospital; well known as a pathologist, chemist and medical expert, died at his home in Utica, December 15, after an illness of three years, aged 69.

William P. Caffey, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1900, local surgeon of the Denver & Rio Grande Railroad at Castle Gate, Utah, died suddenly from heart disease at his home in that place, December 9.

Lewis Gelston, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1905, a member of the medical staff of the Calumet and Hecla Mining Company, Calumet, died in that city from scarlet fever, December 13, aged 21.

Morton Grinnell, M.D. Bellevue Hospital Medical College, New York City, 1881, formerly of New York City, died at his home, Beaver Brook Farm, Milford, Conn., December 10, from pneumonia, after a short illness, aged 50.

Peter Henry Reiche, M.D. University of Maryland School of Medicine, Baltimore, 1869, of Baltimore, was struck by a street car and died, December 9, an hour after the accident, at the City Hospital, Baltimore, aged 68.

William P. Fenlason, M.D. State Certificate (Tennessee), 1899, died at his home in Chattanooga, December 1, from peritonitis due to injuries inflicted by William Waller, for causes unknown, November 18, aged 66.

James Fullerton, M.D. Years of Practice, Illinois, 1878, one of the oldest practitioners of Mason County, Ill., died at his home in Bath, where he had practiced for 52 years, December 6, from senile debility, aged 77.

Thomas Grant, M.D. Manitoba Medical College, Winnipeg, 1896, a member of the American Medical Association, died at his home in North Bend, Neb., December 4, after an illness of more than a year, aged 37.

John J. Dearborn, M.D. University of Vermont Medical Department, Burlington, 1873, died at his home in Salisbury, N. H., December 6, after an invalidism of several years, aged 55.

Nicodemus Theodore Tanski, M.D. Cincinnati, 1882, of Cincinnati, died at the Seton Hospital in that city, December 17, from burns sustained during an attack of syncope, aged 57.

William H. Dowell, M.D. Cincinnati, 1895, died at his home in Green Camp, Ohio, November 30, from pneumonia complicating typhoid fever, after an illness of three weeks, aged 37.

Thomas W. Hunt, M.D. Jefferson Medical College, Philadelphia, 1894, formerly of Lanesboro, Minn., and Bridgeport, Okla., died at his home in Haskell, I. T., September 17, aged 40.

A. Stanley Dolan, M.D. Michigan, 1882, formerly assistant superintendent of the Southern California Hospital for the Insane, died suddenly in his room at Riverside, Cal.

James L. Curl, M.D. Barnes Medical College, St. Louis, 1897, died at his home in St. Louis, November 24, from pneumonia, after an illness of less than three days, aged 29.

Perley I. Aiken, M.D. Jefferson Medical Colege, Philadelphia, 1867, died recently at his home in Honolulu, H. I., after a long and painful illness, and was buried October 28.

Ellwood S. Gloninger, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1887, died at his home in Philadelphia, December 14, aged 50.

L. B. Bond, M.D. Atlanta, 1895; local surgeon to the Baltimore & Ohio Railroad, died at his home in Mt. Clare, W. Va., from typhoid fever, December 6, aged 34.

Herman Joseph Huyett, M.D. Jefferson Medical College, Philadelphia, 1885, died at his home in Rock Island, Ill., from nephritis, December 10, aged 43.

William H. Kroh, M.D. University of Maryland School of Medicine, Baltimore, 1886, died at his home in Los Angeles, Cal., December 11, aged 46.

Charles E. Eskridge, M.D. Louisville (Ky.) Medical College, 1886, died at his home in Winnsboro, Texas, November 29, from heart disease.

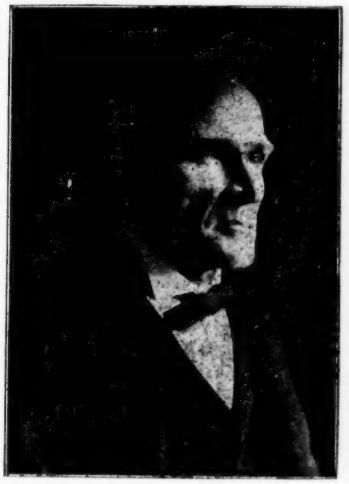
Walter L. Allen, M.D. Atlanta, 1900, of Chalk Mountain, Texas, was stabbed during an altercation, July 27, and died four days later.

William O. Collins, M.D. Kentucky School of Medicine, Louisville, 1854, died at his home in Pimento, Ind., November 28, from nephritis.

Isaac D. Newman, M.D. Cincinnati, Ohio, 1885, died at his home in Oakland, Md., December 12, aged 67.

Deaths Abroad.

Sir John Burdon-Sanderson, Bart., M.D. Edinburgh, 1851; F.R.C.P., London, 1863; M.R.C.P., 1855; D.C.L.; D.Sc.; LL.D.; F.R.S.; Honorary Fellow Magdalen College; president Pathological Society; honorary member of Clinical Society; fellow of the Medico-Chirurgical Society; corresponding member of the Academy of Science of Berlin, the Institute of France, Academy of Medicine of Belgium and Royal Scientific Society of Denmark; late regius professor of medicine, University of Oxford; Jordell professor of physiology, University College, London; physician to the Consumptives' Hospital, Brompton; assistant physician and lecturer, Middlesex Hospital; president of the British Medical Association in 1893; bearer of one of the most illustrious names in medicine, died at his home in Oxford, November 23, from broncho-pneumonia, after a pro-



JOHN BURDON-SANDERSON, M.D.

longed illness, aged 76. In 1870 Dr. Sanderson resigned his hospital appointments to devote himself to physiology and experimental pathology. His first important contribution was on the best means of resuscitating the apparently drowned. Other investigations were on asphyxia, the pathogenic properties of the stools of cholera patients, the artificial tuberculosis, and the intimate pathology of contagion.

E. Ziegler, M.D., professor of pathology and pathologic anatomy at Freiburg, died November 30, aged 56. He was the publisher and editor of the *Beiträge zur path. Anatomie und zur allgem. Pathologie,* and of the allied *Centralblatt,* and he has contributed a large number of important works to science. The article on "Inflammation" in the "Twentieth Century Practice of Medicine," 1899, was from his pen. He was born at Berne and has served as privat docent or professor at Würzburg, Zurich, Tübingen and Freiburg, removing to the latter place in 1889.

L. Brühl, M.D., one of the first and most prominent members of the German Imperial Health Office, died at Berlin, November 35, aged 70.

R. von Leuthold, M.D., surgeon general of the German army and body physician to the emperor, died at Berlin, December 4, aged 73.

Book Notice

THE PRACTITIONERS' VISITING LIST (Heretofore known as the Medical News Visiting List) for 1906. Lea Brothers & Co., Philadelphia, 1905.

MEDICAL RECORD VISITING LIST or Physicians' Diary for 1906. New Revised Edition. New York: William Wood & Co.

These visiting lists are pocket-sized, wallet-shaped books, bound in flexible leather, with flap, pencil, pocket, calendar, valuable tables and data, and classified blanks for recording various details of practice, such as charges, calls, engagements, addresses, cash account, etc. They are made for various numbers of patients, monthly or weekly, dated or undated, etc. They are excellently arranged for the physician's convenience.

Queries and Minor Notes

SYPHILIS AND REPAIR FRACTURES.

——Dec. 7, 1905.

To the Editor:—I have a case of compound fracture of the tibia near the juncture of the lower and middle thirds. The fibula is also broken. The bones were much splintered and a small piece had to be removed. The patient, a man, had syphilis seven years ago. He took antisyphilitic treatment for a year and a half. He is married, and his wife became infected and had one abortion. She is now troubled with a syphiloderm. I have treated both since June with potassium iodid and protoiodid of mercury, ¼ gr. What is the probable effect of syphilis on the uniting of a fracture. What would be the best treatment in this case? X. Y. Z.

ANSWER.—It is generally conceded that syphilis does not interfere with repair of fractured bones. Syphilis, particularly in the large cities, is an exceedingly common disease, yet in the large hospitals it is very rare indeed to find that syphilis has played any part in the cause of fracture, and it is very doubtful if, in itself, it ever interferes with union. In the treatment of the fracture in the above case, therefore, the indications should be met without regard to the syphilitic history. On the other hand, if syphilitic lesions be present they should receive their proper treatment without regard to the presence of the fracture.

PHYSICIANS' CARDS.

Another physician's card comes to our table to add to the collection. The front side contains the following (names being changed):

O. C. TONLAY, A.M., M.D.,
Eclectic Physician.

SPECIALTIES: Skin Diseases. Nervous Diseases. Urinary Disorders. Female Troubles.

TELEPHONE, 187. WEEKLY BLOCK, *LASINA, NEW OHIO.*
German and English spoken. (SEE OVER.)

The reverse side of the card reads as follows:

Dr. TONLAY has had a practical experience of 33 years as a Physician and Specialist, both in the Allopathic or regular; and in the Eclectic or Botanic Schools of medicine. The Doctor prefers and generally gives the extracts of roots, herbs, barks and flowers of the earth (that is the Eclectic practice), and such DOES NOT INJURE the most delicate stomach or system. Children do not mind to take my medicines. Dr. Tonlay has taken a special course in study of ALL CHRONIC DISEASES, and particularly upon NERVOUS DISEASES, SKIN DISEASES, AND DISEASES OF KIDNEYS, BLADDER, AND FEMALE TROUBLES. The Doctor also cures Rupture, Piles and Goiter by the Hypodermic method without surgery. Having been in the Special practice in New Orleans, La., and St. Louis, Mo., and made Chronic Diseases a Special Study, he claims Superior Skill in the treatment of such troubles.

N. B.—Dr. Tonlay prepares and furnishes his own medicines at his office.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending December 16:

Koerper, C. E., asst.-surgeon, relieved from further temporary duty at the post of Washington Barracks, D. C.

Hanner, John W., asst.-surgeon, granted three months' leave of absence, to take effect on his being relieved from duty in the Philippines Division, with permission to return to the United States via Europe.

Hutton, Paul C., asst.-surgeon, ordered to report in person, December 29, to Lieut.-Col. Geo. H. Torney, deputy surgeon general, president of examining board, at the Army General Hospital, Presidio of San Francisco, Cal., for examination to determine his fitness for advancement.

Ruffner, E. L., asst.-surgeon, advanced to rank of captain from this date (December 15).

Cass, Wm. E., contract surgeon, ordered from Vancouver Barracks, Washington, to Fort Stevens, Ore., for temporary duty.

Adair, Geo. F., contract surgeon, ordered from Fort Wadsworth, N. Y., to Fort Jay, N. Y., for temporary duty.

Branch, Frederick D., contract surgeon, returned from Fort Jay, N. Y., to his proper station, Fort Wood, N. Y.

Slater, Ernest F., contract surgeon, returned to duty at Fort Hancock, N. J., from sick leave of absence.

Chase, Alpha M., contract surgeon, returned to Fort Reno, Okla., from leave of absence.

Marvin, Marion F., contract surgeon, left Fort Robinson, Neb., on leave of absence.

Dickenson, Clarence F., contract surgeon, returned to Fort Logan, Colo., from leave of absence.

Waddell, Ralph W., dental surgeon, left Fort Crook, Neb., on leave of absence.

Navy Changes.

There are no changes in the Medical Corps, U. S. Navy, for the week ending December 16.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending December 13:

Kalloch, P. C., surgeon, detailed to represent the service at the meeting of the Maine State Board of Health, Augusta, Me., December 7.

Wasdin, E., surgeon, granted leave of absence for one month from December 15.

Carrington, P. M., surgeon, granted leave of absence for seven days from December 7, under paragraph 189 of the regulations. Granted extension seven days leave of absence from December 14.

Wickes, H. W., P. A. surgeon, granted leave of absence for one month from December 20.

Greene, J. R., P. A. surgeon, granted leave of absence for one month from December 18.

Kerr, J. W., P. A. surgeon, relieved from duty at St. John, N. B., and directed to report at Bureau, Washington, D. C.

Corput, G. M., P. A. surgeon, relieved from special temporary duty at New Orleans, La., and directed to rejoin station at New Orleans, La.

McClintic, T. B., P. A. surgeon, granted leave of absence for twenty days from December 13.

Berry, T. D., P. A. surgeon, relieved from duty at New York, N. Y., and from special temporary duty at New Orleans. Authorized to resume leave status.

Long, J. D., P. A. surgeon, granted seven days leave of absence from November 15, under paragraph 191 of the regulations.

Bahrenburg, L. P. H., asst.-surgeon, granted leave of absence for three days from December 11.

Boggess, J. S., asst.-surgeon, granted leave of absence for two days from December 10.

Ebert, H. G., asst.-surgeon, relieved from duty at Fort Stanton, N. M., and on expiration of present leave of absence directed to proceed to Seattle, Wash., for exclusive duty in connection with the examination of aliens.

Salmon, T. W., asst.-surgeon, proceed from Ellis Island, N. Y., to Buffalo, N. Y., for special temporary duty.

Spratt, R. D., asst.-surgeon, granted seven days' leave of absence from December 6, under paragraph 191 of the regulations.

Frost, W. H., asst.-surgeon, granted two days' leave of absence from November 29, under paragraph 191 of the regulations.

Patterson, A., acting-asst. surgeon, granted leave of absence for one month from October 8.

Quigley, F. Leo, acting-asst. surgeon, granted leave of absence for seven days from December 9, under paragraph 210 of the regulations.

Richardson, S. W., pharmacist, relieved from duty at Wilmington, N. C., and from special temporary duty at New Orleans, La., and directed to report to the medical officer in command at New Orleans, La., for duty and assignment to quarters.

McKay, M., pharmacist, relieved from duty at Cincinnati, Ohio, and directed to report at Bureau, Washington, D. C., for duty, relieving pharmacist E. M. Holt.

Allen, G. C., pharmacist, relieved from duty at New Orleans, La., and directed to proceed to Fort Townsend, Wash., reporting to the medical officer in command for duty and assignment to quarters.

Allen, G. C., pharmacist, granted leave of absence for two days.

Ryder, L. W., pharmacist, granted leave of absence for fourteen days from December 11.

Troxler, R. F., pharmacist, relieved from duty at Port Townsend, Wash., and directed to proceed to Chicago, Ill., reporting to the medical officer in command for duty and assignment to quarters.

Holt, E. M., pharmacist, relieved from duty in bureau, and directed to proceed to Wilmington, N. C., reporting to the medical officer in command for duty and assignment to quarters.

Neves, George, pharmacist, granted leave of absence for eleven days from December 20.

BOARD CONVENED.

Board convened to meet at Portland, Me., Dec. 11, 1905, for physical examination of an officer of the Revenue Cutter Service. Detail for the board: Surgeon P. C. Kalloch, chairman; Acting Asst.-Surgeon A. F. Stuart, recorder.

CASUALTY.

Surgeon C. T. Peckham died Dec. 9, 1905, at Buffalo, N. Y.

REMOVAL.

Pharmacist H. E. Davis, removed from the service Dec. 13, 1905, effective Nov. 10, 1905.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the surgeon general, Public Health and Marine-Hospital Service during the week ended December 9:

SMALLPOX—UNITED STATES.

California: San Francisco, Nov. 11-Nov. 25, 8 cases.
District of Columbia: Nov. 25-Dec. 2, 1 death.
Florida: Jacksonville, Nov. 25-Dec. 2, 1 case.
Kentucky: Covington, Nov. 25-Dec. 2, 9 cases.
Louisiana: New Orleans, Nov. 25-Dec. 2, 1 case.
Maryland: Baltimore, Nov. 25-Dec. 2, 3 cases.

SMALLPOX—INSULAR.

Philippine Islands: Manila: Oct. 7-14, 2 cases.

SMALLPOX—FOREIGN.

Canada: Toronto, Nov. 18-25, 3 cases.
Chile: Iquique, Oct. 28-Nov. 4, 16 deaths.
China: Hongkong, Oct. 7-14, 1 case.
France: Paris, Nov. 4-11, 14 cases, 2 deaths.
Gibraltar: Nov. 12-19, 5 cases.
Great Britain: Leeds, Nov. 11-18, 2 cases.
Madras: Oct. 21-27, 2 cases.
Mexico: City of Mexico, Nov. 4-18, 6 cases, 3 deaths.
Russia: Moscow, Oct. 28-Nov. 4, 6 deaths; St. Petersburg, Oct. 21, Nov. 4, 8 cases, 3 deaths.
Turkey: Constantinople, Oct. 29-Nov. 19, 8 deaths.

YELLOW FEVER—UNITED STATES.

Louisiana: New Orleans, July 21-Nov. 25, 3,395 cases, 460 deaths.

YELLOW FEVER—FOREIGN.

District of Honduras: Belize, Nov. 23-30, 1 case, 1 death.
Cuba: Habana, Oct. 16-Dec. 5, 31 cases, 11 deaths.
Ecuador: Guayaquil, Nov. 7-14, 2 deaths.
Honduras: Puerto Cortez, Nov. 19-25, 3 cases, 1 death.
Mexico: Vera Cruz, Nov. 19-25, 1 case, 1 death.
Panama: Nov. 20, 1 case.

CHOLERA—INSULAR.

Philippine Islands: Manila, Sept. 30-Oct. 21, 21 cases, 22 deaths; Province, to Oct. 7, 210 cases, 183 deaths.

CHOLERA—FOREIGN.

India: Madras, Oct. 21-27, 38 deaths.
Straits Settlements: Singapore, Oct. 21-28, 1 death.

PLAGUE—INSULAR.

Philippine Islands: Manila, Sept. 30-Oct. 21, 2 cases, 2 deaths.

PLAGUE—FOREIGN.

Africa: (Portuguese) Chinde, Sept. 29-Oct. 8, 6 deaths.
China: Hongkong, Oct. 7-21, 3 cases, 3 deaths; Yingkow, Oct. 21, 6 cases, 5 deaths.
India: Bombay, Oct. 24-31, 7 deaths; Karachi, Oct. 21-Nov. 5, 20 cases, 17 deaths.
Japan: Kobe, Oct. 14-21, 3 deaths.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the surgeon general, Public Health and Marine-Hospital Service, during the week ended December 15:

SMALLPOX—UNITED STATES.

California: Los Angeles, Nov. 18-Dec. 2, 4 cases.
District of Columbia: Washington, Dec. 2-9, 3 cases.
Florida: Jacksonville, Dec. 2-9, 3 cases.
Illinois: Galesburg, Dec. 4-11, 1 case.
Kentucky: Covington, Dec. 2-9, 1 case.
Louisiana: New Orleans, Dec. 2-9, 4 cases.
Maryland: Baltimore, Dec. 2-9, 1 case.
New York: New York, Nov. 25,-Dec. 2, 1 case.

SMALLPOX—FOREIGN.

Africa: Cape Town, Oct. 14-21, 4 cases.
Brazil: Pernambuco, Oct. 14-31, 93 deaths.
Chile: Iquique, Nov. 4-11, 7 cases, 5 deaths.
China: Hongkong, Oct. 25-Nov. 1, 1 case; Shanghai, Nov. 1, present.
France: Paris, Nov. 18-25, 21 cases, 2 deaths.
Great Britain: Liverpool, Nov. 11-18, 1 case.
India: Bombay, Oct. 31-Nov. 7, 1 death; Madras, Oct. 28-Nov. 10, 27 deaths.
Italy: Catania, Nov. 16-30, 3 deaths.
Russia: Moscow, Oct. 7-28, 18 cases, 3 deaths; Odessa, Oct. 21-Nov. 11, 41 cases, 10 deaths; St. Petersburg, Oct. 28-Nov. 4, 6 cases, 1 death.
Spain: Barcelona, Nov. 10-30, 11 deaths.

YELLOW FEVER.

Cuba: Habana, Oct. 16-Dec. 13, 43 cases, 13 deaths; Matanzas Province, Dec. 8-13, 4 cases, 1 death.
Honduras: Puerto Cortez, Nov. 14-21, 1 death.
Mexico: Tehuantepec, Nov. 25-Dec. 2, 1 case.
Panama: Colon, Nov. 21-28, 2 cases, 1 death.

CHOLERA—INSULAR.

Philippine Islands: Manila, Oct. 21-28, 4 cases, 3 deaths.

CHOLERA—FOREIGN.

India: Madras, Oct. 28-Nov. 10, 26 deaths.

PLAGUE—FOREIGN.

India: Bombay, Oct. 31-Nov. 7, 14 deaths.
China: Hongkong, Oct. 14-Nov. 1, 5 cases, 5 deaths; Niuchwang, to October, 4 deaths.
Japan: Formosa, Oct. 1-31; 1 case, 1 death; Kobe, Nov. 8-19, 13 cases, 11 deaths; Osaka, Nov. 2-17, 23 cases, 15 deaths.
Strait Settlements, Singapore, Oct. 14-21, 1 death.

Medical Organization

Georgia.

MIDDLE GEORGIA MEDICAL ASSOCIATION.—The physicians of this section met at Griffin December 8 for the purpose of effecting a reorganization of the association.

WILKES COUNTY MEDICAL SOCIETY.—The physicians of Wilkes County met recently at Washington and perfected permanent organization on the standard plan. The new society has on its roll every practicing physician in the county. Dr. Thomas J. Willis was elected president; Dr. John J. Hill, vice-president, and Dr. A. W. Simpson, secretary and treasurer, all of Washington.

ELBERT COUNTY MEDICAL SOCIETY.—The physicians of Elbert County met in Elberton, December 5, and formed a county medical society on the standard plan. The following officers were elected: President, Dr. A. S. J. Stovall, Elberton; vice-president, Dr. Amos C. Smith, Coldwater; secretary and treasurer, Dr. William A. Matthews, Elberton, and censors, Drs. Joseph E. Johnson, L. Pope Eberhardt, and A. B. Matthews, all of Elberton.

NEWTON AND ROCKDALE COUNTY MEDICAL SOCIETY.—Under the direction of Dr. Edward C. Davis, Atlanta, councilor for the fifth district, a local medical society has been organized on the standard plan, which includes in its membership the physicians of Newton and Rockdale counties. Dr. E. W. Ragsdale, Starrsville, was elected president, and Dr. W. Darracott Travis, Covington, secretary. The society will meet monthly, alternating between Conyers and Covington.

Kansas.

GREENWOOD COUNTY MEDICAL SOCIETY.—The physicians of the county met at Eureka, November 16, and with the assistance of Dr. Oliver J. Furst, Peabody, councilor for the fourth district, perfected the organization of a county medical society on standard lines. Dr. Leslie S. Trusler, Fall River, was elected president; Dr. Jeptha Dillon, Eureka, vice-president, and Dr. William T. Grove, Eureka, secretary and treasurer.

HARPER COUNTY MEDICAL SOCIETY.—On the call of Dr. Oliver J. Furst, Peabody, councilor of the fourth district, a meeting of the physicians in Harper County was held at Harper, November 8, at which a county association was formed on the standard plan. The following officers were elected: Dr. Clarence W. Winbigler, Harper, president; Dr. Charles J. Callender, Anthony, vice-president; Dr. Alpha D. Updegraff, Anthony, secretary and treasurer; Drs. Marcus P. Crisler, Attica; J. Andy Bowles, Bluff City, and B. S. Jordan, Waldron, censors, and Dr. Arthur E. Walker, Anthony, delegate to the state society.

Michigan.

MUSKEGON-OCEANA COUNTY MEDICAL SOCIETY.—At a meeting held in Muskegon, December 8, the name of the Muskegon Medical Society was changed to the Muskegon-Oceana Medical Society. Dr. John F. Denslow, Muskegon, was elected president; Dr. J. D. Buskirk, Shelby, Oceana County, vice-president; Dr. Vernon A. Chapman, Muskegon, secretary; Dr. Jacob Oosting, Muskegon, treasurer, and Dr. George S. Williams, Muskegon, censor.

Ohio.

NOBLE COUNTY MEDICAL SOCIETY.—Dr. Charles H. Higgins, Zanesville, acting for Dr. Edmund C. Brush, Zanesville, councilor for the eighth district, went to Caldwell, November 15, to organize a medical society for Noble County.

COLUMBUS (EAST SIDE) MEDICAL SOCIETY.—At a meeting held in Columbus, December 6, at which 25 physicians of the East Side were present, it was decided to form an organization.

Dr. George M. Clouse was elected temporary chairman, and Dr. Grace Welch, temporary secretary.

Oregon.

JOSEPHINE COUNTY MEDICAL ASSOCIATION.—The physicians of Josephine County met recently in Grant's Pass and organized a medical society on the standard plan. At the last meeting the association put itself on record as opposed to the lodge or contract system of the practice of medicine.

South Carolina.

LAURENS COUNTY MEDICAL SOCIETY.—At the annual meeting of this society a reorganization was effected on the standard plan, under the direction of Dr. Orland B. Mayer, Newberry, councilor for the third district. The officers elected were as follows: Dr. John H. Miller, Cross Hill, president; Drs. William H. Gial, Laurens, and S. F. Blakely, Ora, vice-presidents; Dr. A. J. Christopher, Laurens, treasurer; Dr. Rolfe E. Hughes, Laurens, secretary, and Drs. W. D. Ferguson, Laurens; Jesse H. Teague, Laurens, and T. L. W. Bailey, Clinton, censors.

SIXTH DISTRICT MEDICAL ASSOCIATION.—At the annual meeting of the Pee-Dee Medical Society and the society of the Sixth Councilor District, held in Florence, November 15, under the presidency of Dr. Frank H. McLeod, councilor of the district, it was decided to merge the two organizations. The following officers were elected: Dr. James L. Napier, Blenheim, president; Drs. James Evans, Florence; Joseph F. Dusenberry, Conway; Joseph C. Lawson, Darlington, and C. Henslee, Dillon, vice-presidents, and Dr. Bery G. Gregg, Florence, secretary and treasurer. A committee was appointed to revise the constitution and to report at the next meeting.

Tennessee.

WILSON COUNTY MEDICAL SOCIETY.—The physicians of Wilson County met recently at Lebanon and organized a medical society with the following officers: Dr. G. R. Gwynn, Lebanon, president; Dr. Jerry W. McFarland, Corums, vice-president, and Dr. A. O. Eskew, Partlow, secretary and treasurer.

SULLIVAN COUNTY MEDICAL SOCIETY.—The Bristol Medical Society, at its regular meeting, December 4, was formally disbanded and in its stead was formed the Sullivan County Medical Society on the standard plan. Dr. McMinn Pearson was elected president; Dr. M. B. St. John, vice-president, and Dr. Nathan H. Reeve, secretary and treasurer, all of Bristol. The Virginia members of the society will be entitled to retain their membership as privileged members and will enjoy the same privileges as the Tennessee members, with the exception of membership in the State Medical Society of Tennessee.

Texas.

BOWIE COUNTY MEDICAL SOCIETY.—At a meeting of the members of the Bowie County Medical Society and visiting physicians, November 17, to hear Dr. J. N. McCormack, a motion was made and unanimously carried that the secretary of the Bowie County Medical Society express its thanks for the very interesting and instructive addresses of Dr. McCormack, chairman of the Committee on Organization of the American Medical Association, and that a copy of these resolutions be sent to the Secretary of the American Medical Association.

We feel that Dr. McCormack has done us a great deal of good, that new interest has been aroused and that many new members will be the result of his work.

T. F. KITTRELL, Secretary.

Society Proceedings

COMING MEETINGS.

American Dermatological Association, New York, Dec. 28-30.
Western Surgical and Gynecological Association, Ka Mo., Dec. 28-29.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Eighteenth Annual Meeting, held in Louisville, Ky., Dec. 12-14, 1905.

Under the Presidency of DR. LEWIS C. BOSHER, Richmond, Va.

Surgical Repair of Injured Nerves.

DR. J. SHELTON HORSLEY, Richmond, Va., classified the surgical methods of repair as follows: 1. Simple nerve suture, including all cases where the ends of the nerve are brought into direct contact and sutured, even when nerve stretching or resection of the long bone may be necessary. 2. Flap operations, which are usually unsatisfactory. 3. Nerve bridging. By this term is meant those cases in which a foreign substance is used to bridge over the defects between the ends of the divided nerve. This includes not only transplantation of nerve tissue from lower animals, but also *suture à distance*. 4. Nerve implantation or anastomosis. Under this head are included those cases in which the ends of an injured nerve are implanted into a healthy nerve.

He reported a case falling under the last classification. The patient suffered an injury as a result of which the upper part of the median nerve was destroyed for two and a half inches and the musculo-spiral injured in the lower part of the arm, with paralysis of all muscles in the hand and forearm except those supplied by the ulnar. Three months after this the median was implanted laterally into the ulnar. Fourteen months later both flexion and extension returned to a marked degree. At that time the musculo-spiral was cut across and implanted laterally into the median. Ten months after the second operation sensation and motion of the hand and forearm had almost completely returned. In discussing several points connected with the case Dr. Horsley concluded that the extensors must have been supplied through the anterior interosseous of the median, because flexion and extension improved simultaneously, and because extension was not interfered with at the second operation, when the musculo-spiral was completely divided.

DISCUSSION.

DR. CHARLES H. MAYO, Rochester, Minn., said one question that interests him more especially is the difference in the ability of repair of a sensory nerve and a motor nerve; also combined sensory and motor nerves. For instance, about the head, where we have the purely motor and sensory nerves, it is almost impossible to keep a sensory nerve from uniting itself. It will get out and grow for inches and repair itself; but a sensory nerve having peripheral impulses toward the center seems to lack regeneration like a motor nerve in which the impulse comes from the center out. He has taken out the infraorbital, plugged the opening with silver, and has had a case as many as seven years without return of sensation in that area, yet within a few months, after operating again, and removing the silver plug, the sensory nerve which had been lying dormant for this length of time, would get out, hunt up a partner, so to speak, and go to work. Take the motor nerve of the arm, where there are acute sensory and motor nerves, we will get more rapid regeneration because of the peripheral impulses, and as the sensory nerve of the arm is so much in excess over that of the nerve of the leg, we will get earlier repair in the surgery of nerves of the arm than we will in the nerves of the leg.

Foreign Bodies in the Esophagus.

DR. STUART MCGUIRE, Richmond, Va., said that the diagnosis of foreign body in the esophagus is based on the history of the case, the external palpation of the neck, the passage of an esophageal bougie, and finally by the use of the *x*-ray. The character and location of the foreign body being determined, the practical question is how to remove it. If it is round or smooth, efforts should be made to extract it with forceps and probangs, or to make the patient eject it by swallowing masses of partially masticated food and then vomiting. If it be small, it may seem wise to endeavor to push it into the stomach. None of these expedients should be tried when the foreign body is pointed, sharp or angular. Under modern surgical technic an open operation is the safest procedure. There are two means of approach, one by an external esophagotomy, the other by a gastrotomy, and the selection of the method depends on the location of the impaction. If it is opposite the cricoid cartilage, an esophagotomy should be done; if it is below the level of the supraclavicular notch, then gastrotomy should be performed.

As an illustration of the operations of esophagotomy and gastrotomy he reported 2 cases. In one the patient, aged 10, while playing with a glass stopper, put it in her mouth and swallowed it. It lodged in the esophagus opposite the cricoid cartilage and produced complete obstruction. The foreign body was removed by an external esophagotomy.

In the second case, a baby aged seven months, while being dressed, seized an open safety-pin and put it in its mouth. The mother, in her efforts to remove it, pushed it first into the fauces and then into the esophagus. The pin was removed in this case by a gastrotomy.

DISCUSSION.

DR. J. WESLEY LONG, Greensboro, N. C., reported the case of a forty-six-day-old infant who had swallowed an open safety-pin; the pin lodged in the esophagus opposite the two cricoid cartilages. A radiograph, however, showed that the point of the pin was below the arch of the aorta. It produced constriction of the esophagus where the left bronchus crosses it, and the pin was removed by an external esophagotomy without shock. He thinks there are some cases in which this operation is preferable to gastrotomy.

DR. W. S. GOLDSMITH, Atlanta, Ga., mentioned the case of a patient who swallowed the concave part of a dental plate, which lodged in the esophagus, and was retained for a period of four months. At the end of this time patient was very much emaciated and weak. After locating the foreign body, efforts were made to extract it with forceps, but this could not be done. It then occurred to him to try Bull's method of attaching a series of sponges to a long silk ligature and using an esophageal bougie, passing it out through the mouth and leaving in position the series of sponges. After attaching the bougie, he said it is a simple matter by a few sweeping movements backward and forward to push the foreign body into the stomach and extract it through a gastrotomy opening. The foreign body in this case was of such consistency that the *x*-ray was of no value.

DR. H. A. ROYSTER, Raleigh, N. C., narrated the case of a child 2 years of age who, two weeks previously to his seeing the case, had swallowed the wheel of a tin toy wagon. The child was able to swallow liquids, but not solids. During this time it subsisted on milk and liquid food. He used a medium-sized shotted semi-elastic bougie for the purpose of an examination; this passed into the esophagus, met with some resistance on its way, after which he was enabled to pass it farther without destruction. After applying a mouth-gag he was enabled to extract the foreign body with an esophageal forceps. The foreign body lay transversely across the esophagus.

DR. J. SHELTON HORSLEY said that if a foreign body can not be removed by ordinary means, no time should be lost in resorting to early operation. He reported the case of a child who had swallowed a camel from a grab-bag. The child put it into its mouth; it was situated a little lower than the level of the larynx. He tried to extract it by several different methods, but was unsuccessful. He saw the child on the fourth day after it had swallowed the foreign body, did an esophagotomy, and removed it with comparative ease. The esophagus was injured and gangrenous. Septic symptoms developed, and the child died on the fourth day following the removal of the foreign body. He thinks the child's life might have been saved by an earlier operation.

DR. CHARLES M. ROSSER, Dallas, Texas, reported 2 cases of foreign bodies in the esophagus. In one the foreign body, an ordinary pin, was located by the *x*-ray, but could not be removed by ordinary means. Two-thirds of the pin was buried, but with the aid of the fluoroscope the pin was caught by its head and with forceps extracted. In the other case a child had swallowed a nickel, which was located within two or three inches of the cardiac end of the esophagus. Gastrotomy was performed and the foreign body extracted. The child lived about six or eight hours, then died, apparently without shock.

DR. RUFUS B. HALL, Cincinnati, reported the case of a child of a physician, five months old, who swallowed a safety-pin an inch and a half long. It remained in the esophagus for a time, but at the end of twenty-four or thirty-six hours the symptoms caused by its presence disappeared. The child was able to take the breast and thrived well. An *x*-ray picture was taken, which disclosed an open safety-pin in the pyloric end of the stomach. Parents declined to have an operation done for its removal until unfavorable symptoms developed. Several *x*-ray pictures were subsequently taken, but the child did not develop any symptoms referable to the presence of the safety-pin. When the child was twenty-six months old it passed the pin by the natural route. The child is now 7 years of age.

DR. W. D. HAGGARD, Nashville, Tenn., related the case of a child eighteen months old who swallowed a pin, the head of which was as large as a cherry seed. As the child developed cough, the presumption was that the pin had lodged in a bronchus. An *x*-ray picture threw very little light in regard to the presence of the foreign body. The pin appeared to be located in a bronchus with its head down and to the left. The child had little or no pulmonary symptoms to justify an operation. At the end of ten days another *x*-ray picture was taken, but the symptoms were so slight that operation was postponed. Four days later another radiograph was taken, which failed to locate the pin, and shortly after this the child passed the pin by the natural route.

Officers.

The following officers were elected for the ensuing year: President, Dr. George H. Noble, Atlanta, Ga.; vice-presidents, Dr. Stuart McGuire, Richmond, Va., and Dr. E. Denegre Martin, New Orleans; secretary, Dr. W. D. Haggard, Nashville, Tenn. (re-elected); treasurer, Dr. Charles M. Rosser, Dallas, Texas (re-elected).

Baltimore was selected as the place for holding the next annual meeting.

(*To be continued.*)

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, held Oct. 24, 1905.

DR. H. M. SHERMAN in the Chair.

Cholecystectomy as an Initial Procedure.

DR. T. W. HUNTINGTON reported the history of a patient who had had repeated attacks of biliary colic, accompanied at times by jaundice, fever and clay-colored stools. At operation after a particularly violent attack, the gall bladder was found to contain 16 large stones and about four ounces of thick, grayish, opaque fluid. No stone could be found in the common duct. The gall bladder was drained, and the drainage tube was removed on the fifth day. The discharge of bile through the fistula continued, however. A few days after the operation the stools became clay-colored and remained so. Seven weeks after the operation the abdomen was again opened. No cause for the common duct obstruction could be found except an enlarged, hard head of the pancreas, probably due to a chronic pancreatitis. A cholecystenterostomy was then performed, using a linen thread to unite the lateral surfaces of the gall bladder to the duodenum, after the method of McGraw, and fortifying with a row of Lembert sutures. At subsequent operations it was necessary to reopen this anastomosis with a knife, after dilating the sinus, and finally to close the sinus itself. Since then the patient's recovery has been rapid and complete. Huntington said that cholecystectomy as a deliberately planned initial procedure is proper (1) in extensive trauma of the viscus where suture is impossible, (2) when there is a long standing and impermeable stricture of the duct, (3) in gangrene of the gall bladder, and (4) in malignant disease of the gall bladder. It is probably better not to leave in a contracted gall bladder following chronic cystitis in most cases (1) because there may be, as in the present case, an undiagnosed obstruction in the common duct, which could later be relieved by performing a cholecystenterostomy, and (2) because the drainage afforded through the cholecystostomy wound may be of value in relieving an infected biliary system.

DISCUSSION.

DR. B. MACMONAGLE stated that there are other possible indications for a primary cholecystectomy. Dr. Clinton Cushing frequently performed this operation, in most cases with satisfactory results. In cholecystitis the gall bladder is infected, and if we can be certain that the common duct is open it might be justifiable to do a cholecystectomy and so remove the main seat of infection. Yet it is hard to exclude stones in the hepatic ducts which may later cause a common duct obstruction

and so, as a general rule, it is better to leave the gall bladder in at the operation.

DR. J. H. BARBAT believes that the gall bladder should be removed only when the cystic duct was absolutely occluded and a cholecystostomy could not, therefore, drain the bile ducts.

DR. T. W. HUNTINGTON said that it is difficult to determine whether the closure of the cystic duct is a temporary or a permanent one, and that a stone in the common or hepatic ducts can never be absolutely excluded.

Pseudo-tuberculosis of the Peritoneum.

DR. C. M. COOPER stated that of the many causes that may give rise to structures resembling true tubercles, the most important so far as the peritoneal cavity is concerned are animal parasites and foreign bodies. Tenia eggs and the hooklets of the echinococcus have both produced in the abdominal cavity a condition that resembles tuberculosis and can be distinguished from it only by finding the causative agents within the small nodules. Cholesterin crystals from a ruptured ovarian cyst and pieces of sponge that had been left in the peritoneal cavity at operation have produced similar conditions. Finally the foreign bodies may be food particles that have reached the peritoneal cavity through a perforated gastric ulcer, as in Hanau's case and the one here reported, that of a middle-aged woman whose illness had begun suddenly six weeks before with pain in the lower abdomen; no fever, vomiting or intestinal obstruction; pulse rapid and feeble; marked aversion to food. The abdomen was somewhat distended, with slight tenderness over its lower portion. Free fluid could be demonstrated within the abdomen. Dullness posteriorly over the ascending colon. Leucocytes, 12,000. At operation a large quantity of brownish fluid was evacuated from the peritoneal cavity and the intestines were seen to be studded with innumerable miliary tubercles. At autopsy a postcolonic collection of pus was found originating from a perforated gastric ulcer. Microscopic examination showed that the peritoneal nodules contained no tubercle bacilli, but did contain small food particles that had evidently escaped from the stomach through the perforated ulcer.

Regular Meeting, held Sept. 26, 1905.

DR. D. W. MONTGOMERY in the Chair.

Palpable Ulnar Nerves.

DR. C. M. COOPER showed a patient with a chronic inflammation of the joints, multiple glandular enlargements, and enlargement of the spleen. The ulnar nerves were thickened. Dr. Cooper believes that such thickening is far from uncommon and that it is most apt to occur in patients who have chronic joint affections of the hands. This fact should be borne in mind when enlargement of the peripheral nerves is found in suspected cases of leprosy.

Protection from the X-Ray.

DR. C. M. COOPER protects himself from the deleterious effects of the *x*-ray by standing in a leaden compartment and making all observations by means of mirrors. One mirror reflects a fluoroscopic image of a known test object and in this manner the penetrating quality of the rays can be estimated. Another mirror, by reflecting the tube itself, indicates the general character of the light. In this manner the operator is not exposed at all to the direct action of the light.

DR. B. F. CARPENTER stated that he knew of an *x*-ray operator who had no active spermatozoa in his semen as long as he was using this light regularly. Active spermatozoa, however, reappeared after he discontinued its use.

Underlying Conditions in Erythema Multiforme Exudativa.

DR. P. K. BROWN reported two cases of erythema multiforme exudativa which showed lesions in organs other than the skin. The first patient was a child 6½ years old that had had attacks of tonsillitis with endocarditis extending over a period of four years. In December, 1904, the patient had ten days of epigastric pain, and following this some fever and a punctate eruption over the trunk, shoulders and thighs. There was general glandular enlargement, the heart was more irregular than usual, and the murmur was louder. The urine contained albumin, red blood cells, and a few casts. On the third day the patient suffered from pains in the ankle joints. Desquamation began on the fourth day and lasted six weeks. The affected areas desquamated entirely, even the nails taking part in the process. The second patient was the same age. During the first attack in January, 1904, the fever reached 104.2 and lasted three or four days. The first eruption appeared early, covered the whole body and was scarlatiniform in character, except on the shins, where it was more blotchy and irregular. There was general glandular enlargement. Eleven days after the onset, multiple miliary hemorrhages appeared over the body, and these were accompanied by hemorrhages from the mucous membranes and by signs of pericarditis. On certain parts of the body areas of circumscribed edema were visible. Desquamation lasted about two weeks. Blood cultures were negative. There was a marked anemia; hemoglobin, 28 per cent., and red cells, 1,700,000, with a relative increase in the mononuclear leucocytes. The child made a slow but uninterrupted recovery. In the year and a half that have elapsed since that time the patient has had eight or ten similar attacks, some of which have been very light, and only one was accompanied by extensive eruption and desquamation. In the beginning of the attacks undigested food is frequently found in feces, and the breath often has a heavy odor.

DISCUSSION.

DR. HOWARD MORROW stated that typical erythema multiforme desquamativa runs a course that is different from that described by the speaker. He was inclined to diagnose the cases reported as desquamative scarlatiniform erythma.

DR. D. W. MONTGOMERY has seen very few cases of erythema multiforme with severe internal lesions, other than joint pains, that do not yield to the salicylates.

SOUTHERN MEDICAL COLLEGE ASSOCIATION.

Annual Meeting, held at Louisville, Ky., Dec. 11, 1905.

Under the presidencey of DR. CHRISTOPHER TOMPKINS, Richmond, Va.

Ten of the fourteen colleges of the association were represented. More stringent rules applying to the admission of students were adopted.

PRESIDENT TOMPKINS read an address on "The Advancement in Preliminary Educational Requirements." The suggestions set forth in the address, after considerable discussion, were resolved in a motion which was unanimously passed. The motion provided that from the present time until January, 1908, an applicant for admission to any college of the association must have had two years in a recognized high school or a certificate from an acknowledged preparatory school, besides a grammar school education. After Jan. 1, 1908, there will be required for admission a high school diploma, or a certificate of graduation from a recognized preparatory school, and the courses at the college shall be for four years of seven months each instead of six months, as is the case with some schools at the present time.

Since the last meeting five colleges not in the association have either filed applications for membership or will do so within a short time. Two of the colleges which have filed applications are the Medical Department of Epworth University, Oklahoma City, Okla., and the Medical Department of the Southwestern University, Dallas, Texas. The other three colleges are in Georgia and Maryland.

Officers.

The following officers were elected for the ensuing year: President, Dr. Christopher Tompkins, Richmond, Va. (re-elected); vice-president, Dr. T. H. Fraser, Mobile, Ala.; secretary and treasurer, Dr. G. C. Savage, Nashville, Tenn. (re-elected); executive committee, Dr. J. S. Kane, Nashville, Tenn.; Dr. W. B. Rogers, Memphis, Tenn., and Dr. Stuart McGuire, Richmond, Va.

The next meeting of the association will be held at the same time and place (Baltimore) as the Southern Surgical and Gynecological Association.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Regular Meeting, held Oct. 5, 1905.

DR. R. C. MORRIS in the Chair.

Hemiterata.

DR. CHARLES S. BARNES exhibited a specimen belonging to the class of malformations known as hemiterata. The mother, aged 24, had previously given birth to two healthy children, the oldest 2 years of age. In the second pregnancy there was an excess of amniotic fluid. During the recent pregnancy only apparent abnormalities were increased thirst and undue abdominal enlargement. Labor, delayed because of the excessive distension of the abdomen, was terminated spontaneously after manual rupture of the membranes. The latter was followed by the discharge of about four quarts of amniotic fluid. The child, a male, was apparently well formed, and, for the first twenty-four hours seemed healthy. At the end of this time it began to regurgitate all liquid given by mouth, and later frequently vomited much dark green liquid similar to that seen in intestinal obstruction of the adult. Enemata were ineffective in freeing the bowels. Death by exhaustion occurred at the end of seventy-two hours.

The probable diagnosis of intestinal obstruction was confirmed by the specimen. Two inches of the duodenum, beginning one and one-half inches below the pylorus, consist of a small impervious fibrous cord. Below the latter, for a short distance, the gut is abnormally small but patulous, thence gradually shading into a normally formed gut. The presence of hyramnios raises the interesting question as to whether the abnormality and the hydramnios are related as cause and effect. Though not definitely determined in this case, it seems more than probable that the lesion of the gut in this region may have caused stenosis of the umbilical vein.

A few practical thoughts suggested by this case are: 1. The probable futility of any surgical intervention in this and similar cases, although it would be advisable to try it, if positive diagnosis can be made. 2. The complications of parturition incident to hydramnios. 3. The frequency of the association of hydramnios and fetal abnormalities. 4. The obscurity of the etiology of hydramnios and the desirability of careful search for pathologic lesions as causes. 5. As valuable knowledge is often to be acquired by postmortem study of the fetus, whatever may have been the apparent cause of death, such study should always be made when possible.

Backache in Women and Its Treatment.

DR. WILLIAM E. PARKE said that backache is a frequent symptom in women coming to gynecologic dispensary service. In a record of 1,000 cases 25 per cent. or more were found to present this symptom. The seat of pain is the lumbar, the sacral or the coccygeal region. The lumbar pains are usually due to some general disorder, while the sacral and coccygeal pains are more frequently due to some disorder of the pelvic viscera, such as lacerations, displacements, inflammations or tumors. The most frequent cause of backache is neurasthenia and this in turn may be due to the pathologic condition of the pelvis. Backward displacements are particularly prone to cause backache, due, perhaps, to impeded circulation. It was present in this condition 194 times and absent only 40 times. Backache was noted in 46 patients without gross pelvic lesions. Many of these doubtless had under-developed or cirrhotic ovaries. Backache is sometimes due to toxemia from intestinal absorption of imperfect metabolism, also to congestion of the menstrual period. Pain in the coccyx is due to inflammation, dislocation or fracture. It is often a pure neurosis. Many diseases of the bowels, muscles, kidneys and nerves which give rise to backache are not referred to in this paper.

The treatment of backache is complex and often unsatisfactory. Medical and surgical measures are employed. Toxic and lumbar backaches are treated with laxatives, diuretics and colon irrigation. Some are given salol, salicylates or iodids. To the congestive type are administered ergot, digitalis, strychnin and bromids. The anemic are given iron and tonics. Temporary relief is afforded by the use of local counter irritation. For neurasthenics the rest cure is advised. Surgical measures have for their object the sewing up of lacerations, the correcting of malpositions and the removal of diseased organs and tumors.

DISCUSSION.

DR. CHARLES P. NOBLE believes that renal trouble seldom causes backache. In cases of movable kidney, as a rule, there is no backache. When present, the pain is due to congestion or to torsion of the ureter. If a loose kidney becomes partly twisted so as to interfere with return circulation, the kidney becomes congested and there is a certain amount of local soreness that may be felt in the back.

DR. WILLIAM KRUSEN emphasized the value of the drinking of large quantities of water in these cases. Frequently a rheumatic diathesis is associated with pelvic disease. He has never seen a case of nephritis with backache, although people think they have kidney trouble when they have backache. Pains may be due to the lithemic diathesis, and a certain proportion of backache is due to traumatism. The fact that women are habitually constipated and that they drink small quantities of water are two factors to be borne in mind in treatment. Hydrotherapy plays an important part in the relief of symptoms.

Miscellany

An Efficient Army Medical Department.—In discussing this Dr. G. Frank Lydston says that the concentration of abundant, up-to-date medical supplies—in the purchase of which boodle should have no part—in centers which present suitable transportation facilities is a *sine qua non*. Surgeons should be given more authority and a freer hand, and should be appointed for their capacity and not for their political pull. Several thousand miles, more or less, of red tape should be eliminated from the medical department and thrown into the ash-heap, where it properly belongs.

The Profession of Medicine.—In two respects the medical profession deserves the grateful recognition and regard of all other callings in modern life. It has always insisted that the practice of medicine is a profession and not a trade. Trade is occupation for livelihood; profession is occupation for the service of the world. Trade is occupation for joy of the result; profession is occupation for joy in the process. Trade is occupation where anybody may enter; profession is occupation where only those who are prepared may enter. Trade is occupation taken up temporarily, until something better offers; profession is occupation with which one is identified for life. Trade makes one the rival of every other trader; profession makes one the co-operator with all his colleagues. Trade knows only the ethics of success; profession is bound by lasting ties of sacred honor.—President Faunce of Brown University, Addressing the Rhode Island Medical Society.

Means to Correct the Dispensary Abuse.—Imhofer of Prague discusses, in the *Prag. med. Wochft.* for October 5, the best means to combat the dispensary abuse, which has assumed large proportions there. He suggests as the measures best adapted for local conditions that all applicants to the dispensary should have to pass first through a room where an inspector demands a certificate testifying to the bearer's lack of means or a line from a physician indorsing his application. A card is then given the applicant and he can then proceed to the dispensary proper, or to the clinic or ward. No one is admitted to the dispensary or clinic without presentation of a numbered card of this kind. The inspector is always at liberty to pass an applicant directly into the dispensary or clinic when circumstances demand the avoidance of red tape delay, and an applicant accompanied by his physician should also have free right of way. By some such sifting process the dispensaries and hospitals could be kept free for the poor, while those able to pay for medical attendance would be excluded from them.

An African Poison Test.—Dr. F. C. Wellman describes in the *Journal of Tropical Medicine* the poison test used in Africa to determine the guilt or innocence of a suspected person. He recently saw the test made with fatal consequences. He says:

> The agents which are generally used in this region are obtained from two *Leguminosæ*, *i. e.*, bark of the Ombambu tree (*Erythrophlæum guinense*) and leaves of a bush called Okalembe (*Jephrost vogelii*), together with the rootlets of another bush belonging to the *Polygalaceæ* called by the natives Utata (*Securidaca longipedunculata*). All three are powerful poisons. These substances are

dried, powdered with various others, placed in the bottom of a small gourd and carefully covered with the resinous exudation from the Ulemba tree (*Ficus psilopoga*). On top of this is poured an evil-smelling mixture of different harmless solutions. Over the surface of the liquid is sprinkled a light-colored powder. The witch doctor, with many mystic incantations and flourishes, stirs the mess a couple of times with his finger, taking care not to touch the bottom. Then the fortunate party whom it is proposed to acquit drinks. The mixture is again stirred, scratching the resin at the bottom, and liberating the poisonous substances. After a few minutes of ceremonies and rites to gain time for the poison to thoroughly permeate the whole, the draught is once more stirred and the victim (who is always made to drink last) quaffs to his doom. Another method, similar in principle, is to have a skin bag with two compartments, one containing the poisonous powdered substances and the other an innocuous powder of the same color, sprinkling these in turn over the top of an inert decoction.

A SIMPLE CLASSIFICATION OF INSANITY.

THEODORE DILLER, M.D.
PITTSBURG, PA.

"In the interest of a simple classification of scientific terms," Dr. John B. Chapin, in his last annual report as superintendent of the department for the insane of the Pennsylvania Hospital, announces that the statistical tables of this institution have been modified. Turning to these tables one finds only these forms of insanity: Melancholia, mania, dementia and delirium from toxic conditions, paresis, epilepsy and imbecility—the same which were known to Pinel and Esquirol.

Dr. Chapin states that 60 forms of mania and 57 forms of melancholia, and 21 forms of dementia have been formulated; and apparently wearied and disheartened by the various attempted elaborate classifications of the insanities and of the failure of any general agreement between them, he goes back to the simplest of all classifications, that best known in the history of psychiatry, to the general medical profession and to the courts.

While one may readily sympathize with Dr. Chapin's feelings and desires it is not so easy to feel sure that this simple classification really simplifies the subject. Indeed, the question may be fairly raised as to whether it does not make it more hazy. The Gordian knot of the classification of the insanities is not so readily cut.

It would be interesting to know how Dr. Chapin would classify the cases commonly called paranoia or monomania, many of which exhibit neither mania, melancholia or dementia to any conspicuous degree; and how he would similarly dispose of cases known to other alienists as dementia præcox, maniac-depressive insanity, etc.

Certainly such a simple classification can convey but little information to the reader of Dr. Chapin's report. Much could be argued for a partial etiologic classification as compared with it. That a psychosis is of toxic or infectious, of evolutional or involutional origin may generally be ascertained with a considerable degree of accuracy; and a classification which sets forth these facts is helpful to him who peruses it; and hospital reports are intended to be of use to those who read them.

No classification of the enormous group of morbid mental phenomena commonly called insanity has ever been made which has met with general approval. None can be made today. Alienists generally are agreed, however, that a classification on a pathologic basis would, if it were possible, be the ideal classification; and while such a classification is not possible to-day, it is growing less and less impossible. It would seem that alienists should classify "insanities" as fully as is now possible on this basis, leaving to the future its full consummation. To this end it is always helpful to regard every case of insanity as an expression, or more properly, as a partial expression of a physical disease or maldevelopment, applying to it, besides the ordinary tests of psychology, those of the best current methods of clinical medicine.

In the meantime it would appear that a moderately extended classification of the insanities as given by Kraepelin, for instance, is of more practical value than the simple classification to which Dr. Chapin returns in that it allows for a better recognition and a better prognosis and treatment of the various physical diseases which express themselves chiefly or conspicuously by morbid mental phenomena commonly called insanity.

THE NEWSPAPER AND MEDICINE.

H. SHERIDAN BAKETEL, M.D.
JERSEY CITY.

The various news stories on medical topics, which appear in the daily press from time to time, are mines of mirth to those who know. Few articles on medical subjects which appear in the columns of the average newspaper are either truthful, accurate or scientific.

While the perusal of these stories often excites the risibilities unduly, there is a serious side to the matter. Newspapers, which to a very great extent are the popular teachers of the masses, are educating the people in the wrong direction by the dissemination of misstatements. When a part of the press condemns antitoxin because a few persons have died subsequent to its administration, thousands of people are prejudiced against this remedy. Many of these misinformed people would doubtless refuse to allow antitoxin to be used in their families if occasion required and, as a result, innocent lives would be offered up as a sacrifice on the altar of newspaper inaccuracy.

The medical profession is to blame for this state of affairs, because, as a whole, the papers do all in their power to present actual facts to their readers.

I know from previous years of experience as an editor in the metropolitan field that many editors take as much care to verify the statements given them as a bank cashier does to verify signatures to checks.

The field of the newspaper man is wide. Although often a college graduate, he can not reasonably be expected to be equally versed in medicine, law, theology, engineering and the other professions, into which subjects his work leads him almost daily. It is not to be wondered at, then, that a great New York paper should solemnly declare that a great surgeon (giving his name, of course), performed a marvelous operation which consisted in tying off the common "catotid" artery, an operation hitherto unknown, etc.

The average newspaper does not desire to make itself the laughing stock of the medical public by the publication of foolish and unscientific statements. The editor is usually actuated by high motives and realizing that the bulk of the people believe what they read, endeavors as far as in him lies, to lead his readers along the paths of truth and right.

He publishes an article on some medical topic, furnished by a young reporter and obtained in good faith, possibly from a drug clerk or hospital orderly. He is ignorant of the fact that its subject matter is rankest nonsense, for none of his medical readers has taken the trouble to so inform him. Thus he goes on publishing misstatements from the same irresponsible source, each time doing more and more to injure the cause of medicine in the eyes of the public.

Had some medical man called up the editor on the telephone and informed him of the blunders in the article the wielder of the pen would have been put on his guard. The young reporter would have heard from "the old man" in no uncertain terms, the drug clerk or hospital orderly as a source of medical misinformation would have been relegated to innocuous desuetude, and when medical subjects were treated in the future a reputable physician would have been consulted. It is in this way that the profession is to blame for the idiotic and inane medical tales which often appear in newspapers.

This growing evil can be remedied by a definite plan of campaign on the part of the trustees of the American Medical Association, the national clearing-house of things medical, which would have as an end the publication of medical truths in all the important papers of the country.

There is hardly an editor in the United States who would not gladly print from time to time accurate articles on medical topics, written in careful newspaper English, free from long and unusual medical terms.

A series of well written articles on the situation in Panama, for example, showing the great progress made in sanitary matters, and the institution of the very latest methods known to hygienic science by Colonel Gorgas and his able assistants and demonstrating how, by careful living along stated lines, the residents of the Canal Zone could obviate disease, would go

far toward assuaging the fear of those who have relatives in Panama. If the present campaign against the health conditions along the line of the canal is continued, it will be quite impossible to obtain competent men to go there. The proper kind of publicity would change public opinion.

Again, take the casualities attendant on the barbarous manner in which we celebrate Independence Day. This year, according to newspaper reports, over fifty persons lost their lives by the explosion of powder in some form, while hundreds were maimed, many permanently. A series of articles published throughout the country in May and June, showing the awful results of the past celebrations of the Fourth, and the wide wake left by tetanus and its kindred diseases, would assist in arousing the people against this national slaughter and would conclusively demonstrate that patriotism could be shown in ways other than by killing and maiming the youth of the land.

There is a widespread prejudice among the masses against hospitals and operations. Surgeons are looked on as butchers, seeking whom they may knife. Carefully prepared articles could combat these foolish notions and could bring out the benefit derived from hospitals and operative procedures.

The patent medicine evil is the curse of the nation. Millions of people lay countless millions of dollars in the greedy maw of this ogre. Men and women contract habits from the constant use of patent medicines that forever after hold them in tenacious embrace and prove their ultimate ruin.

In no way could the American Medical Association do a greater service to mankind than by demonstrating to the public, through the daily press, the fallacy of the use of patent, secret nostrums. Of course, some papers, which carry the advertising of these concerns, would not publish articles attacking the business, but a majority of the reputable journals would gladly join in a righteous fight to put the vendors of alcohol and opiates, under high-sounding names, out of business.

Space forbids going further into details concerning the great undeveloped field for medical publicity, other than to say that seasonable articles should be furnished, instructing the people how to prevent the diseases peculiar to the various times of year and how to care for their bodies and their minds.

If such a scheme were put into effect the people would be better off, and would have far more respect for the physician, and the work he is striving to accomplish in preventive medicine and in the alleviation of disease.

The practice of medicine would be raised to a higher plane. Medical men, oftentimes classed by the public as high-grade artisans, would assume the high position to which they are entitled and which their fellow-practitioners in Great Britain already occupy.

To carry out this scheme will take much thought. The most feasible plan, to my mind, is to have the trustees establish a publicity bureau, the chief of which should map out the plan of campaign, oversee the preparation of articles, and communicate with the editors of the large papers concerning their acceptance of special articles. In short, the chief should act in a capacity similar to the managing editor of a metropolitan paper.

If the special stories were put up in the style usually adopted by Sunday papers, carefully edited and suitably illustrated, they would be accepted by practically every decent paper in the country. No two papers in the same city will take the same article, hence it would be necessary to have various separate lists, to which stories would be sent and which would not conflict with the other.

Besides this, it is extremely probable that arrangements could be made with the plate associations which supply specials in stereotyped form to all the weeklies and small dailies in the country, to furnish them with weekly contributions, so that the propagation of medical truth would extend to the very ends of the country, with the result that every reader of a paper from Maine to California and from Dawson City to Key West would profit by reading medical facts, not fancies.

The medical publicity bureau could also inaugurate a method for local, county and state societies to make such medical news public as is deemed necessary, for the correction of evils in their midst and for the squelching of the physician, who calls up the newspaper office every time he attends an accident case, performs an operation or goes out of town.

If the trustees of the Association will take up this matter either along the lines indicated or in a manner which seems best to them, I know that five years from now all the members of the medical profession in the United States will rise up and call the American Medical Association blessed.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Lobar Pneumonia in Children.

Dr. G. A. Sutherland, in the *Clinical Journal* (London), states in the treatment of lobar pneumonia in children that the greater number of cases, if put to bed, with fresh air and suitable diet, will generally recover. These cases, however, although the natural course of the disease can not be shortened, must be carefully observed, in order to relieve any troublesome symptoms which are liable to arise in the course of the disease, and to meet complications which are not unlikely to occur. Among these symptoms is pleuritic pain, which causes the child a great deal of suffering, and in the treatment of this symptom he recommends the application of a turpentine fomentation or a linseed poultice over the painful area for half an hour or until the skin is thoroughly reddened. This may be repeated some hours later, but it should not be kept on the chest continuously, irrespective of the presence of this symptom. He especially emphasizes, therefore, the value of these hot moist applications if used interruptedly.

In the diaphragmatic form of pleurisy two or three leeches may be applied over the affected area in combination with strapping of the affected side. When such treatment fails he recommends as a last resort the use of opium and morphin.

In this connection he dwells on the contraindication of opium in pneumonia, because of its toxic effect on the respiratory center, and states that it should not be given except in extreme circumstances. Coughing is another symptom which is very disturbing to the patient, due in part, perhaps, to the irritation of the exudate which is present, or to the presence of a bronchitis. In either case the interrupted use of hot local applications, as described above, is of value.

He speaks also of the position of the patient in bed as being a cause in producing these paroxysms of coughing, and recommends that the position of the child be changed from time to time. If necessary, the use of steam inhalations may be resorted to in irritable conditions of the bronchi. It may be used for from ten to fifteen minutes at a time, and repeated at intervals of every four or five hours. When there is persistent coughing, with or without much secretion, he recommends the tincture of belladonna in doses of from 5 to 10 minims (.30-.65), repeated as the individual case requires. It is especially recommended when the secretion is in excess, as it dulls the sensory branches of the vagus throughout the lungs, and stimulates the respiratory centers. In some cases from 5 to 10 minims (.30-.65) of tinctura opii camphorata will relieve the hacking cough present.

Pyrexia is another condition in the course of pneumonia which sometimes must be combated, but it must be remembered that the height of the temperature is not necessarily an indication of the gravity of the disease, but prolonged high temperature after the seventh day tends rapidly to weaken the patient and must be carefully watched. The author deprecates the use of antipyretic drugs in the reduction of the temperature of pneumonia. In infants the employment of a hot bath, which may be rapidly cooled to 85 F., will frequently cause a drop in the temperature of from one to two degrees, and at the same time will relieve the restlessness of the patient. In older children he recommends sponging in bed with

hot or tepid water, and in extreme nervous disturbances the temporary application of cold cloths or the icebag to the head. He also recommends the internal use of liquor ammoniæ acetatis in dram doses (4.00) as an antipyretic. This rise in temperature, however, may not be due to the toxic effect of the pneumococcus alone, but may be caused by gastrointestinal disturbances, and consequently calomel in small doses may relieve the hyperpyrexia, and the restlessness.

In the treatment of insomnia in these cases he recommends cold applications to the head or hot applications to the chest. The use of ammonium bromid in from 5 to 10-grain doses (.30-.65) is recommended as effective and as the least harmful of all the hypnotics. In some cases a dose of brandy, drams 2 to 4 (8.00-15.00) in hot water is recommended as a very efficient hypnotic.

Any signs of cardiac weakness must be carefully watched for, such as dilatation of the left ventricle or failure of the right heart, and at the onset of these signs he recommends the use of alcohol in the form of brandy or wine, strychnia and ether. For an infant one year old in the precritical stage of pneumonia he recommends strychnia in doses of from 1/100 grain to 1/200 grain (.0006-.0003) every four hours. If dilatation of the right ventricle is present, with cynanosis and dyspnea, showing an overaction of the right side of the heart, some depletion of blood is recommended. He therefore recommends the application of three or four leeches over the hepatic region, followed by a hot fomentation to encourage further bleeding. In connection with this treatment he advises further assistance by a two or three-grain dose of calomel, followed by a saline, in addition to the heart stimulants already recommended. Dry cupping is sometimes advised, employed over the base of the lungs posteriorly, as a substitute for the leeches.

He has not seen much benefit from the use of oxygen inhalations.

In some cases dyspnea and rapid breathing arise, which apparently do not depend on the pulmonary or cardiac condition. In such cases the cause is probably the failure of the respiratory center, due to the effects of the toxemia, and in these instances he recommends atropin as a direct respiratory stimulant, combined with strychnia, given in doses of from 1/100 to 1/200 grain (.0006-.0003) hypodermically every four hours for a child 5 years of age.

Laryngismus Stridulus.

Comby, in the *Medical Bulletin*, recommends that in these sudden paroxysms hot compresses be applied to the anterior portion of the neck, and that an emetic be given internally. The child, of course, should be confined to the house, and given hot drinks with antispasmodic remedies. The following combination is recommended in such conditions:

℞. Tinct. belladonnæ.....m. xx 1|30
Potassi bromidi.....gr. xxx 2|
Syrupi aurantii corticis q. s. ad.....℥i 30|

M. Sig.: One teaspoonful every three hours in a little water.

In severe cases the dose of the bromid may be increased. The following combination is sometimes recommended as a substitute for the foregoing:

℞. Spiritus chloroformi.....m. x |65
Glycerini .....3i 4|
Syrupi tolutani .....3v 20|
Aquæ dest. q. s. ad.....℥ii 60|

M. Sig.: One teaspoonful at a dose, and repeat every half-hour if necessary.

In some cases in which asphyxia may be probable, rhythmic traction of the tongue is recommended previous to intubation or tracheotomy. He recommends as prophylactic treatment of this trouble that any vegetative growths in the nasopharynx should be removed as well as large faucial tonsils, if present.

Mercury in Parasypilitic Conditions.

In the treatment of certain stages of syphilis and in those diseases due to the toxins of this disease, as tabes dorsalis, Dr. Frank Billings recommends mercury given in the usual form, as inunctions, by the application of the ointment to different portions of the body each day, preferably the inner portions of the thighs, the calves of the legs, the sides of the thorax, and the inner portion of the arms. He also recommends as a substitute for this method of introducing mercury into the system, the injections of the bichlorid of mercury deeply into the muscular tissue, about two or three times a week. The dose of the bichlorid recommended is about 1/25 of a grain (.0025). He especially recommends as probably the most suitable preparation of mercury in the treatment of these parasyphilitic conditions the salicylate administered in the following combination:

℞. Hydrargyri salicylatis.....gr. xxiv 1|65
Liquid paraffin .....℥ss 15|

M. Sig.: Five minims injected subcutaneously two or three times a week.

The advantage of this latter form of medication is that it is taken up very gradually by the system, and consequently the effects of mercury are present for a number of weeks or months after these injections have been made, owing to this slow absorption. The size of the dose may be gradually increased, if necessary, to meet the requirements of the case. The iodids are recommended in conjunction with this treatment, and are to be given in gradually increasing doses by the mouth.

The Treatment of Laryngeal Manifestations of Influenza.

E. J. Moure, in an abstract in *Merck's Archives*, states that the laryngeal manifestations of influenza may be described under four different forms—the catarrhal form, the infiltrated edematous form, the ulcerative form, and the myopathic form. As local treatment in these different conditions he recommends an inhalation of the following combination:

℞. Menthol .....gr. x |65
Balsam peruviani .....3ss 2|
Thymol .....gr. i |06
Tinct. eucalypti q. s. ad.....℥ii 60|

M. Sig.: One teaspoonful floated on a pint of hot water as an inhalation.

In conjunction with this treatment he recommends hot fomentations externally applied to the neck and throat, as especially useful in the painful congestive forms. Scarification, according to the author, may be necessary in the edematous form, when the following combination fails to give the proper relief:

℞. Cocainæ hydrochlor.....gr. ii-iiiss |12-.20
Sol. adrenalin (1-1,000).....m. xl 2|65
Glycerini
Aq. menth. pip., āā.....3vi 24|
Aquæ q. s. ad.....℥vi 180|

M. Sig.: To be used as a spray three or four time a day.

Later in the course of the disease, after the infiltration has subsided, he recommends applications of a silver nitrate or zinc chlorid solution, 1 to 100, locally to the affected parts.

Medicolegal

Competency of Witnesses.

The Supreme Court of Georgia says of a witness, in Macon Railway & Light Co. vs. Mason, that, had he been licensed under the laws of that state to practice medicine, he would have been competent to testify as an expert witness on the fact being made to appear that he was a licensed physician. But, generally, nothing more is required to entitle one to give testimony as an expert than that he has been educated in the particular trade or profession. Knowledge gained by consistent and close study of medical works renders one competent to testify as an expert concerning the matters of which he has thus learned. It is not essential that he should be actively engaged in the practice of medicine. Nor is it essential that one who really has a scientific education on the subject should be a graduate of any medical college, or have a license to practice from any medical board. What he knows is what really qualifies him to express an opinion as an expert, and a diploma or license is only important as furnishing satisfactory evidence of his competency as a witness. Accordingly, a person who is neither a physician nor surgeon can express an opinion on a medical question, when the matter inquired about lies within the domain of the profession or call-

ing which the witness pursues. But not being a licensed practitioner, it is necessary to lay the proper foundation showing him to be an expert as to the subjects on which he proposes to express his opinion.

The court also holds that the wife of an injured party is not, because of the marital relation existing between them, and the policy of the law to preserve inviolate the confidential communications between husband and wife, incompetent to testify as to the nature of the injury received by him, and its effect on his physical condition, when there is nothing to indicate that her knowledge on the subject was gained because of any confidence which he reposed in her as his wife. The wife may testify to symptoms which she has observed indicating that her husband suffered from headache, but she should not be permitted to generalize or state any bare conclusion on her observation of others who had headache, she not professing to be an expert.

New Compulsory Vaccination Law.

Chapter 58 of the Acts of West Virginia of 1905 amends section 21 of chapter 150 of the Code of that state by providing that the county court of any county in the state, on petition of 100 voters of the county, shall direct and have enforced on any party or parties compulsory vaccination or quarantine, in case of smallpox epidemic, in any city, town or village of the county or in their said county. Any person refusing to be vaccinated when so directed by the county court, and who can not give satisfactory proof of having been vaccinated previous to that time, or a certificate from a reputable physician showing that a successful vaccination on his or her body is impossible or improper, or sufficient reason be given why it has not been done, shall be placed under quarantine as directed by section 7 of this chapter; provided, further, that when it shall be directed by the county court of any county in this state as herein provided, no child or person residing in a locality in which an epidemic is prevailing shall be admitted to or received into any of the public schools in any city, town, village or the county who can not produce a certificate or satisfactory proof showing a successful vaccination, or a certificate from a reputable physician showing that a successful vaccination on his or her body is impossible or improper, or sufficient reason be given why it has not been done, and the trustees or other officers having charge, management or control of such school shall cause the provisions of this act to be enforced when so directed by the county court. For the purpose of the enforcement of this act the county court may appoint competent physicians in any city, town, village or the county, and fix their compensation, which shall in no case exceed 25 cents for each successful vaccination; and such physicians shall provide themselves with good and reliable vaccine virus with which to vaccinate such persons when directed by the county court. If any physician shall give any person a false certificate of vaccination, as herein provided for, he shall be guilty of a misdemeanor, and on conviction thereof he shall be fined not less than $20 nor more than $100. Any person who shall have smallpox going into another county, within three months of said time, shall be required to produce a certificate showing that he has been properly cleansed and disinfected, which certificate shall state what has been done to accomplish this end, and if said certificate be acceptable to the county health officer of the county to which such person shall go, it shall be deemed sufficient and entitle such person to remain therein, but if not deemed sufficient, such person shall not be permitted to remain therein.

To Prevent the Spread of Communicable Diseases.

Chapter 519 of the Laws of Tennessee of 1905 provides that whenever any case of smallpox, yellow fever, cholera, bubonic plague, typhus fever, diphtheria, membranous croup, scarlet fever, or other communicable diseases exist (except it shall not embrace any venereal disease, such as gonorrhea or syphilis), or is even suspected to exist in any household, it shall be the duty of the head of said household, or any other person in such household possessing knowledge of said facts, to immediately notify the municipal or county health authorities. Furthermore, whenever any physician, surgeon or practitioner of medicine shall know or suspect that any person or persons, whom they have been called to visit, or who has been brought to them for examination (or any other suspicious information received relative thereto), is, or are infected, or even suspected, with any of the aforementioned diseases, he shall, and it shall be his duty to, immediately notify the health authorities of the town or county in which said diseased person or persons are found.

After receiving such notice, it shall be the duty of all municipal or county health authorities to immediately proceed to carry out such rules and regulations as the state board of health may prescribe, having for their object the prevention and restriction of the disease or diseases above mentioned. The house or locality shall be inspected, and the diseased person or persons, as well as any other person or persons exposed to said disease, may be quarantined. And when a case of either of the diseases above named is reported the local board of health or its health officer shall at once cause to be placed in a conspicuous position on the house where it exists a quarantine card having printed on it in large letters the name of the disease within, or to prohibit entrance to or exit from such house without written permission from the health officer, and no person quarantined by a local board of health or its health officer on account of having a contagious disease, or for having been exposed thereto, shall leave such quarantined house or place without the permission of the health officer, and every physician attending a person affected with any of the aforesaid diseases shall use such precautionary measures to prevent the spread of the disease, as may be required by said local board of health. No person shall remove or deface such card, which shall remain in place until after the patient has been removed from the house, or has recovered and is no longer capable of communicating the disease, and the said house and the contents thereof have been properly disinfected by the local board of health and all other sources of danger of communicating the disease are removed. It shall be the duty of every physician in attendance on any person afflicted with any contagious or infectious disease designated in this act to notify the proper health officer when said premises are ready for disinfection, so that the same may be properly disinfected under the directions of said health officer or some other person under his authority.

Municipal and county health officers or municipal and county boards of health may adopt such measures for the general or local vaccination of the inhabitants of their respective jurisdictions as they shall deem proper and necessary, and whenever necessary vaccinate such inhabitants to prevent the introduction or to arrest the progress of smallpox without being authorized or ordered by the state board, and the expenses in whole or in part of such general or local vaccination shall, on their order, be paid out of the city or county funds, as the case may be. Every person who shall refuse to be vaccinated or prevent a person under his or her care and control from being vaccinated on application being made by the said health officer or said board of health or by a physician employed for that purpose, unless in the written opinion of another physician it would not be prudent on account of sickness, shall be fined not more than $5 for each offense, and any physician fraudulently giving a certificate of sickness or of vaccination to prevent vaccination shall be fined not less than $25 nor more than $50.

Other provisions of the act are that whenever a place is quarantined it shall be the duty of the board of health to provide for all persons confined therein food, fuel, and all other necessaries of life, including medicine and nurses whenever necessary. On receipt of notice of existing or suspected disease as above the board of education, superintendent, or school district board shall be notified, and said public school authorities shall not allow any pupil to attend any public school from the house while any inmate of same is sick with smallpox or other communicable disease, or during the period of two weeks after the death, recovery or removal of the sick person. For one believing himself afflicted with a contagious disease to voluntarily go on the highway or enter a public conveyance, or to knowingly aid him to do it, is made a misdemeanor. The state board of health may carry out these provisions whenever a local board neglects or refuses to do it.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

December 9.

1 *Comparative Study of Various Forms of Tuberculosis. M. P. Ravenel, Philadelphia.
2 Intracorpuscular Conjugation in the Malarial Plasmodia and Its Significance. C. F. Craig, Manila, P. I.
3 What is a Poison? (To be concluded.) R. G. Eccles, Brooklyn, N. Y.
4 *Cerebral Hereditary Syphilis. W. J. Butler, Chicago.
5 Restriction of Contagious Diseases in Cities. C. V. Chapin, Providence, R. I.
6 *Ureteral Catheter and Its Importance in Diagnosis and Treatment of Kidney Lesions. L. W. Bremerman, New York.

1. **Comparative Study of Various Forms of Tuberculosis.**—Ravenel summarizes his paper as follows:

1. The division of mammalian tubercle bacilli into two types, human and bovine, first proposed by Theobald Smith in 1898, has been amply confirmed. These types have cultural, morphologic, and tinctorial characteristics by which they may usually be recognized. The chief point of difference, however, is found in the very much greater pathogenic power of the bovine type. Bovine bacilli, however, are met which have low pathogenic power. 2. No other species of mammal has been shown to harbor a variety of tubercle bacillus so constant in its characteristics as to justify its classification as a third type. 3. Other species suffering from tuberculosis derive their infection from man or from cattle. 4. The human tubercle bacillus, as a rule, has a low pathogenic power for cattle, but cultures are not infrequently found which are virulent for the bovine race. 5. The bovine tubercle bacillus has the power of invading the human body and producing the lesions of tuberculosis. 6. We are at present unable to state the exact proportion of cases in which bovine tuberculosis is transmitted to man, but in view of the evidence at hand we must regard the disease in cattle as the source of a certain part of human tuberculosis, and any relaxation in our laws and precautions against bovine tuberculosis would be most unwise.

4. **Cerebral Hereditary Syphilis.**—Butler says that the nervous system is attacked by hereditary syphilis in a considerable proportion of cases, sometimes without cutaneous lesions, the disease remaining latent until puberty or later. The pathologic conditions include cranial osteosclerosis, periosteitis, meningitis, endarteritis, thrombosis, as well as atrophy, sclerosis and softening of the cerebral cortex. The symptoms are recurring convulsions, severe headache, worse at night, and impaired intelligence. Later the epilepsy may disappear. Hemiplegia frequently develops and the patients may become paralytic idiots. Partial motor paralyses, aphasia and disturbances of the special senses may occur. Mental deficiency, occasionally congenital, usually develops at a later period of childhood. Prognosis is unfavorable unless the condition is recognized and treated in its early stages. Congenital syphilis should be vigorously treated with mercury during the prevalence of cutaneous manifestations and, when nervous symptoms develop, potassium iodid, or if this disagrees, iron iodid, should be added.

6. **Ureteral Catheterization.**—From an experience covering several thousand catheterizations, Bremerman feels justified in saying that the procedure is not nearly so difficult as is claimed. When rigid attention is paid to technic and asepsis and the choice of a proper instrument, there need be no fear of dangerous after-complications. He says that he can not entirely agree with some of the authorities when they state that a catheter should never be inserted in the pelvis of the kidney when that organ is involved by any inflammatory process. He has yet to see any untoward conditions arise from catheterizing a pyelonephritic kidney or one affected with a chronic inflammation.

Medical Record, New York.

December 9.

7 *Certain Forms of Ocular Tuberculosis. C. S. Bull, New York.
8 Displacement of the Abdominal Organs. O. Lerch, New Orleans, La.
9 *Fresh Air and Rest in the Treatment of Pulmonary Tuberculosis. G. R. Pogue, Greeley, Colo.
10 *Reduction Treatment. J. W. Wainwright, New York.
11 Principles of Ethics of the American Medical Association. A. L. Benedict, Buffalo, N. Y.
12 Uncertainties and Fallacies in Scientific Medicine. H. B. Hemenway, Evanston, Ill.

7. **Forms of Ocular Tuberculosis.**—Bull says that tuberculosis of the conjunctiva is much more often a primary disease, the result of an ectogenic infection, even in cases in which tuberculosis has already developed elsewhere in the body, than of infection occurring through the blood. Although tuberculous disease of the conjunctiva is not often secondary to tuberculous disease in other parts of the system, it is itself liable to be the starting point of general tuberculosis. An intact normal conjunctiva, however, can never be infected. There must always be a loss of substance, usually a traumatic abrasion. Tuberculosis of the conjunctiva is more often secondary to nasal tuberculosis than primary. The symptomatology and treatment of tuberculosis in the various other anatomic regions of the eye are discussed in detail, and the author draws the following general conclusions: It is doubtful if any case of intraocular tuberculosis is ever a primary disease. In cases of doubt, or of very difficult diagnosis, the injection of tuberculin is an efficient aid to diagnosis. There is a general reaction in at least 85 per cent. of the cases, and some local reaction in about 50 per cent. As a method of treatment, both the old and new tuberculin have proved practically useless in Bull's experience. It is a remedy which needs careful watching. Surgical intervention in intraocular tuberculous conditions of the eye should seldom be done, unless there is considerable pain which tells on the patient's health, because the disease is not primary, and hence excision would remove only one focus.

9. **Fresh Air and Rest in Pulmonary Tuberculosis.**—Pogue says that much harm has been done to consumptives by the indiscriminate prescribing of fresh air, outdoor life, and exercise, without proper instructions and education of the patient, together with a consideration of the extent of the lesions present. The patient in the early stages of the disease who is told to adopt tent life, without being given definite instructions, is very apt to shut himself up tight at night in his tent, and so spends seven or eight hours a day in a closed canvas box. Patients must be kept outdoors all day long in the open air, and practically the same conditions must prevail at night, but they must be made comfortable, and be protected from cold winds, rains, and storms, and, during the summer months, from the direct rays of the sun. The beginning of the outdoor life must be gradual, without abrupt transition from the patient's usual mode of life. Similar fallacies exist in the minds of the laity, and even of the profession also, regarding the value of exercise. The patient who is told to live out of doors and "rough it" usually does not live long to carry out the injunction. Of 62 patients in various stages of the disease, whose histories are known to Pogue, who during the last five years have taken the "roughing it" cure, 43 are dead and only 2 show signs of having their disease arrested. Rest is the element it is important to secure, for usually the patient is only too apt of his own accord to take too much active exercise.

10. **Reduction Treatment.**—Wainwright says that it must always be remembered that obesity can not be successfully treated by the same or similar methods in every case. Corpulent persons, who are otherwise healthy, by careful dieting, plenty of exercise, baths, and other rational means, may reduce their superabundant adipose deposit, or at any rate may prevent an increase. On the other hand, obesity in disease is but a symptom, and the treatment of the obesity alone may, and probably will, have an injurious effect on the patient's general condition. The cause must be treated and the attempts to reduce the flesh must be governed by the disease from which the patient is suffering. Wainwright describes in detail the various measures of diet, exercise, bathing, etc., that are useful, and points out how they may be adapted to the needs of different individuals.

New York Medical Journal.

December 9.

13 *Avulsion of the Terminal Branches of the Trigeminal Nerve for the Cure of Trifacial Neuralgia. E. LaPlace, Philadelphia.
14 *Treatment of Puerperal Infections. R. W. Holmes, Chicago.
15 Note on the Spirochæta Pallida. C. Herrman, New York.
16 Federal Control of Epidemic Diseases. E. E. Field, Norfolk, Va.
17 Some Extracts from the Diaries of Bishop Nicholson. H. Barnes, Carlisle, England.
18 *Value of Meat Inspection to the Public Health. D. A. Hughes, E. St. Louis, Ill.
19 Pyelonephritis and Ulcer of the Esophagus Complicating Pregnancy. L. T. LeWald, Manila, P. I.

13. **Avulsion of Trigeminus for Neuralgia.**—La Place has devised a gradual method of avulsion whereby he has succeeded in removing a nerve from the seat of the incision to its ultimate ramifications in the skin itself. A special curved hemostatic forceps is used. The nerve is exposed and lifted from its seat. It is then clamped, but not cut; the forceps, held in the right hand, are turned very gently from left to right, winding both the proximal and remote parts of the nerve on itself. This is done very slowly and deliberately, taking as much as two minutes for one turn of the forceps; otherwise the nerve would break. The nerve gradually yields and winds itself on the forceps, slowly but steadily, and the winding is kept up until the nerve finally breaks. It takes from twelve to twenty minutes to obtain this result, and La Place considers time very essential; otherwise some of the removable filaments might be left behind, and the operation rendered in a measure incomplete. The nerve appears as a tightly wound string about the jaws of the forceps. By placing this in water and shaking carefully the nerve soon becomes limber and disentangled, showing itself in its full anatomic condition much more complete and perfect anatomically than would ever be possible by the most skillful dissection. Four patients have been treated by this method during the last two years, and pain has not returned in any case.

14. **Treatment of Puerperal Infections.**—Holmes summarizes his paper as follows:

1. The battle against puerperal infection is practically won by an adequate system of asepsis and antisepsis. True autoinfections very rarely arise, and usually are not of serious portent. 2. It is no more possible to operate aseptically without skilled assistants in obstetrics than in general surgery; properly to conduct an operative case requires a full quota of assistants. 3. Puerperal infection is not a specific disease. Diverse types of micro-organisms may be the etiologic factors, and any part of the parturient canal may be the seat of the infection. 4. To treat locally a thermal condition of the puerperium without a clear, positive knowledge of the seat of infection should be characterized as an obstetric crime. 5. At the present time there is absolutely no method of adequately reaching the offending germs in the uterine submucosa or muscularis. The curette can not discern the locality of the retained remnants of secundines; the finger alone can ascertain this; a placental forceps more easily, more certainly, and with infinitely greater safety, can remove them, under guidance of the finger. 6. It is a grave error to neglect digital revision of the uterus after any instrumentation for the purpose of cleaning the uterine cavity. 7. Nature, by supplying the reaction zone of Bumm, offers the surest safeguard to the woman; puerperal infections demand the same rest for the uterus as do inflamed parts elsewhere. 8. The danger of shreds in the uterus is greatly overestimated as regards their rôle in infections. 9. Active operative measures endanger the life of the woman doubly or trebly to the extent the expectant plan does. 10. The use of saline purges, administration of ergot, hydrastis, etc., removes much of the danger or necessity for active therapy; in a day or two the danger is often past, for, like a baby, the lying-in woman is subject to evanescent febrile elevations.

18. **Value of Meat Inspection.**—Hughes discusses the relation of animal disease to human disease; the methods of meeting these dangers, and what meat inspection as carried on by the government means to the public. Hughes says that at present the only way for people to protect themselves against diseases communicable from animals and to guard themselves against diseased animals sold in the local markets, killed, prepared for the trade without expert government inspection, and foisted on them as wholesome, is to take advantage of the wisdom of the federal law. If they refuse to purchase meats which have not passed the government inspection, their protection is assured. The government has recognized the danger arising from diseased meats; it has devised methods to meet the danger; it assures the people of safety, provided they consume meats guaranteed to be free from disease.

Medical News, New York.

December 9.

20 *Etiology of Syphilis. S. Flexner, New York.
21 Plea for the More Careful Examination of Diseases of Women by the General Practitioner. W. E. Darnall, Atlantic City, N. J.
22 *Thyrotomy vs. Laryngectomy: Notes on the Frequently Malign Nature of Chronic Hoarseness. C. Jackson, Pittsburg, Pa.
23 Tuberculous Kidney. J. B. Clark, New York.
24 *Simple Device for Ophthalmoscopic Work, Devised Especially to Meet Conditions Existing on Board Ships, but Capable of General Application. R. E. Riggs, U. S. A.
25 *Relation of Incontinence of Urine to Neurasthenic Symptoms, and Its Treatment by the Isolated Induction Shock. A. D. Rockwell, New York.
26 *Treatment of Conditions Resulting from Chronic Anterior Urethritis. W. D. Trenwith, New York.
27 *Improved Head-Holder for the Removal of the Human Brain. B. B. Stroud, Ithaca, N. Y.
28 *Syphilitic Fever. J. A. McKenna, Philadelphia.
29 Relapsing Fever. Koch, Hongkong, China.

20. **Etiology of Syphilis.**—Flexner reviews the subject generally, considering more particularly the causal relation of the pallida to syphilis.

22. **Thyrotomy versus Laryngectomy.**—Jackson calls attention to the frequently malign nature of chronic hoarseness, and urges the necessity for early diagnosis while the case is still operable by thyrotomy, whereby not only the life, but the voice, the comfort, the happiness and the usefulness of the patient may be saved. If the diagnosis be made late, as it usually is, total laryngectomy offers the only hope of prolonging life. Speaking of the endo-laryngeal operation, he says that he considers his years of training to acquire endo-laryngeal skill an utter waste of time so far as the surgery of malignant disease is concerned. It is ten times worse than letting the growth alone, for while failing to extirpate radically it induces local spread and metastatic deposit. He concludes as follows: 1. The patient with cancer of the larynx must have his disease discovered early, else a cure is well nigh hopeless. 2. If discovered early the comparatively slight operation of thyrotomy will cure. 3. If discovered late, total or partial laryngectomy will probably prolong life for a variable period, but recurrence is fairly certain and the short extension of existence lacks many pleasures and comforts. 4. The early curable stages of laryngeal cancer are characterized by nothing but hoarseness, which may disappear and recur. Cough, odor, pain, odynphagia, glandular involvement, external swelling, emaciation, cachexia, etc., are present only after the curable stage is passed. 5. The curable case may come in "to get something for a cold that he can not shake off," without any idea of a serious condition, and throws the physician off his guard.

24. **Simple Device for Ophthalmoscopic Work.**—In order to get a satisfactory light under the varying conditions which confront any one trying to do eyework outside of a well-equipped office, Riggs envelopes an ordinary 16-candle power frosted electric bulb in a thin sheet of lead. With a jackknife and a pair of pincers the sheet is cut and molded to the general shape of the bulb. In this way practically all light is shut out except that which passes through a spherical window about one inch in diameter, cut into the shield after it is applied. Thus with a little ingenuity, and in a few moments, any one who cares to try it, and has electrical attachments at hand, can construct for himself a portable and satisfactory light, which may be suspended from any convenient point and allowed to take a position just behind and to the outside of the ear on the side under examination. The light obtained is soft and equally distributed, and one is scarcely bothered at all by the corneal reflex. The background of the eye is distinctly though softly illuminated, and besides giving the observer an almost normal image, it inflicts on the patient a minimum amount of discomfort. Riggs says that with this arrangement one can easily observe the fundus without the use of a mydriatic, nor is it necessary to have a perfectly dark room. It also gives an equally good view in work about the ear, nose or throat.

25. **Electricity in Urinary Incontinence.**—Rockwell cites the case of a girl aged 13 who was treated successfully by the isolated induction shock. The positive electrode was applied to the sacral region, and the negative, consisting of an olive-shaped electrode, was introduced through the urethra to the sphincter muscle. The isolated induction shock was then administered at the rate of one in five seconds, or about twelve shocks a minute. The applications were repeated every other day for a time, and then less frequently. The character of the treatment so far as concerned rapidity of interruption was approximately adhered to throughout the whole course. The patient finally recovered, but the progress toward complete recovery was neither rapid nor constant, some thirty-five applications having been administered through a period of five months. During this period she had alternations of comparative freedom from attacks and their recurrence with ordinary frequency, but the progress was steadily upward.

26. **Treatment of Chronic Urethritis.**—Trendwith emphasizes the necessity of making an exact diagnosis and of determining the exact status of the case. As a routine measure he advocates the examination of the prostate and seminal vesicles. The treatment should be general as well as local. The local treatment should be governed entirely by the reaction produced by the remedies employed. The urine should be examined at each visit, and no physician should be satisfied to call a patient cured simply because the discharge has ceased. A cure may be said to have been effected when there is no longer any discharge and when the urine is free from pus, shreds or threads, and remains so. Local treatment should be discontinued, but not so the general treatment. The author's method of treatment is described in full.

27. **Improved Head Holder for Removal of Brain.**—The apparatus devised by Stroud consists of a base made of steel tubing, to which is joined a movable upright that can be fixed rigidly at right angles to the base. The upright bears movable jaws to grasp the head on each side and spurs to enter the auditory meatuses; also an adjustable support for the chin. The head is held firmly and both of the operator's hands are free. The apparatus is finished in white enamel and nickel; when not in use it folds flat, so that it occupies little room. The subject lies on the belly, the head being supported and firmly held by the adjustable clamps at the sides and chin. The base of the cranium is horizontal, and serves as a shallow tray in which the brain is supported while the cranial nerves, arteries, spinal cord and membranes are being severed. Thus it is possible to secure a perfect anatomic specimen. The cranium is opened by making a circular cut with the saw about one-half inch above the orbital prominence and the external occipital protuberance. The calvarium is removed either entire or in two pieces by making a second sagittal cut, about one-half inch from the median line over the top of the head to meet the horizontal line. Adhesions between the calvarium and dura are separated by means of a long flexible spatula. The following liquid has been employed by Stroud for a number of years to preserve brains, and has given excellent results:

R.	Sodium acetate	℥xiv	400
	Sodium chlorid	℥xiiss	350
	Formaldehyd 40 per cent	fl. ℥ii	60
	Alcohol 95 per cent	fl. ℥xlvii	1,400
	Water	fl. ℥liv	1,600

The sodium acetate and sodium chlorid are dissolved in fifty-four ounces of water by aid of heat. The solution is filtered and cooled and forty-seven ounces of 95 per cent. alcohol and two ounces of formaldehyd are added. This quantity is sufficient for one human brain. If the specimen is much stained by hemorrhage, the blood may be removed by soaking for a few hours in a solution of salt and water. Ordinarily this treatment will not be required. Brains should remain in the solution for from ten to fifteen days, but a longer period is not harmful. Then they may be put into 75 per cent. alcohol, which should be changed once or twice. They may remain indefinitely in 75 per cent. alcohol, or preferably be put into 82 per cent. alcohol. The advantages claimed for this solution are: 1. The mixture is simple and may be prepared at a moderate cost, about 14 cents per liter, alcohol free of tax. 2. It has about the same specific gravity as that of the brain, which should float without support midway between the top of the liquid and the bottom of the jar. Rarely a brain may sink to the bottom; in this case more salt is added. If it floats on the top, 50 per cent. alcohol is added until it sinks below the surface. 3. The specimens have a more natural appearance than when some other preservatives are employed. 4. There is no distortion. 5. It appears to give good results for brains which are very soft from decomposition. In these cases the pia can not be easily removed. 6. Plexuses and membranous parietes are preserved. 7. The alba and cinerea are visibly differentiated. 8. Brains are moderately flexible, so that fissures may be explored. 9. Tissue hardened in it may be used for histologic study.

28. **Syphilitic Fever.**—According to McKenna, the varied symptoms which cloud the diagnosis of syphilitic fever and make its recognition difficult, may be ascribed to so many of the febrile diseases that the failure of the physician at once to classify properly a case in which syphilis is the cause, is both natural and pardonable. McKenna says that if evidences of syphilis were more often looked for in continued fevers of a doubtful character, or, as a chance, specific treatment given the patient, doubtful diagnosis would frequently be speedily made definite and the health of the patient and the reputation of the physician advanced in a gratifying manner.

Boston Medical and Surgical Journal.

December 7.

30 *Operative Treatment of Old Fractures at Lower End of Radius. H. A. Lothrop, Boston.
31 Gastric and Duodenal Ulcer. E. M. Buckingham.
32 *Case Illustrating the Value of Persistent Conservatism in the Treatment of Ununited Fractures of the Lower Leg. G. H. Monks, Boston.
33 Tuberculosis and Related Diseases of the Lungs in the Medical Out-Patient Department. W. H. Robey, Jr., and R. C. Larrabee, Boston.
34 Study of the Gastric Contents in Twenty-one Cases of Tabes, in Three Cases During Gastric Crises. M. P. Smithwick.

30. **Fractures of Lower End of Radius.**—Lothrop summarizes his views as follows:

1. Fractures at the lower end of the radius are very common lesions. As a result of neglect on the part of the patient, or oversight or otherwise on the part of the physicians, the final result is frequently unsatisfactory, either from the standpoint of function, or appearance, or both. 2. Appropriate treatment applied early should give as good a result as could be obtained in any given case; therefore, subsequent operation is not indicated. 3. In cases in which the final result is not satisfactory, surgical interference of some sort is usually indicated. 4. During the first three weeks whatever union has taken place can usually be broken up by manipulation under an anesthetic and suitable apparatus should then be applied as for a recent fracture. 5. After the third or fourth week the best results are obtained by means of an osteotomy in the line of fracture, followed by treatment appropriate for a recent fracture. 6. In fractures which have existed for from two to six months osteotomy should always improve the position and frequently improves the function, although special consideration should be given each case. 7. After the expiration of six months it is more difficult to correct the deformity. The backward and upward displacement of the lower fragment can always be overcome, but the correction of the lateral displacement is more difficult and usually requires an osteotomy of the ulna. The function is rarely improved at this time. Hence, interference should be limited to selected cases.

32. **Conservatism in Treatment of Ununited Fractures.**—Monks cites a case for the purpose of showing that union is possible in ununited fractures of the shafts of the bones of the lower leg after very long periods of time. In this case union took place about two years after resection of the ends of the fragments, and about three years after the original injury. Even in cases in which the bones are considerably shortened (it was estimated that the shortening in this case was about two inches), the muscles will contract sufficiently to enable the patient to balance himself on the injured leg.

St. Louis Medical Review.

December 2.

35 Immunize the Stegomyia, Anopheles and Culex. C. H. Hughes, St. Louis.

Lancet-Clinic, Cincinnati, Ohio.

December 2.

36 Diagnosis and Treatment of Infection of the Accessory Mucous Cavities of the Respiratory, Digestive and Genitourinary Tracts. B. Holmes, Chicago.
37 *What is the Present Conception of Bright's Disease. G. W. McCaskey, Ft. Wayne, Ind.
38 *Sprained Ankle. R. Carothers, Cincinnati.
39 Contagious Diseases from the Viewpoint of the Sanitarian. B. F. Lyle, Cincinnati.

December 9.

40 Visceral Ptosis—Its Surgery. E. Harlan, Cincinnati.
41 Simple Eye Conditions that Should be Familiar to Every Physician. M. D. Stevenson, Akron, Ohio.
42 Minor Matters. W. Scott, Loveland, Ohio.
43 Syphilis Insontium. E. H. Shields, Cincinnati.

37.—See abstract in THE JOURNAL, Nov. 4, 1905, page 1435.

38.—Id.

Surgery, Gynecology and Obstetrics, Chicago.

November.

44 *New Method of Arthrotomy for Old Dislocations of the Shoulder, Based on Experience in the Radical Breast Removal. E. W. Andrews, Chicago.
45 *Indications for and Methods of Artificial Dilatation of the Cervix Uteri. L. Knapp, Prague.
46 Technic of Instrumental Dilatation of the Cervix According to Bossi. L. Knapp, Prague.
47 Surgical Pathology of One Hundred Mammary Tumors. W. J. Stone, Toledo, Ohio.
48 Case of Cesarean Section Performed Under Relative Indications. J. C. Hoag, Chicago.
49 Case of Chorioepithelioma Following Hydatidiform Mole. W. L. Burrage and T. Leary, Boston.
50 Conclusions Relative to Prognosis and Treatment of Sarcomata of Extremities. F. A. Besley, Chicago.

51 *Operative Treatment of Retrodisplacements, with a New Operation; Intramural Transplantation of the Round Ligaments. C. W. Barrett, Chicago.
52 *Phimosis; Its Treatment by a New Technic. V. D. Lespinasse, Chicago.
53 *When Prostatotomy Instead of Prostatectomy Is Indicated. C. E. Barnett, Ft. Wayne, Ind.

44. **New Method of Arthrotomy.**—The steps of Andrews' operation are as follows: 1. An incision is made from the clavicle downward across the front of the shoulder into the axilla. The cut is large, 50 per cent. longer than by the older methods. 2. The pectoralis major is cut near its insertion, leaving about 1 cm. attached to the bone. This muscle, being cut transversely, is laid over with the skin flap, thus exposing the axillary vein and the brachial plexus. The pectoralis minor is not cut, unless the head of the humerus and the vessels have been forced under it. 3. Careful examination of the vessels, if they cross the tuberosity or head of the humerus, is now made. The artery can not be seen readily, except by drawing aside the vein. On account of this deep position, it is more often involved in the adhesions, and has been the vessel usually torn. Great care and plenty of time are needed to separate these vessels when they or their large branches—e. g., subscapular or circumflex—are found adherent. No efforts at reduction should be made until the vessels and large nerve trunks are isolated and pulled aside. It must be borne in mind that some of the reported injuries of the vessels are due to projecting fragments or spicula on the humerus. 4. The forearm should now be flexed on the arm as a lever, and an assistant should rotate, and make traction, when the fibers of the adhesions will be seen and heard to tear gradually, so that the range of motion increases. Andrews says that this part of the work should be intrusted to some one of experience and judgment in joint work, as everything depends on using a sufficient, but not a dangerous amount of force. The operator, while this is going on, should clear the socket of any granulations and cut and nick such bands as refuse to yield after hard stretching. He should search for the lumen of the shrunken capsule. The head and glenoid cavity soon approach each other, the operator tilting the scapula toward the head of the humerus, and giving directions simultaneously as to reflexing, extending, abducting and rotating the limb, as he sees fit. The operator should not attempt this part himself, ordinarily. At the last moment the head is apt to take a subglenoid position and refuse to ride over the lower rim of the socket. Before cutting the ligaments or sclerosed muscles more widely, as one is tempted to do, if a blunt hook or retractor be made to pull the upper end of the humerus straight away from the body, the head can sometimes be dragged over the lip of the socket by a smart pull at the critical turn of the manipulation. Once in place, the bone can usually be held, although the capsular ligament is far from being intact; sometimes, in fact, has lost its identity in a mass of fibrous tissue. The arm should now be kept against the body until bandages are on. 5. The pectoralis major, and, if cut, the minor, should now be reunited by the Harris tendon suture method, and the skin closed with separate suture. Drainage should rarely be dispensed with. Andrews' operation is invariably a bloody one, if the dislocation is of long standing and the adhesions are firm. Good drainage for a few days prevents infection, which can easily take place with large joint surfaces bathed in wound secretion. Andrews concludes as follows: 1. It must be considered established that great force is never justifiable in old shoulder dislocations. 2. Few cases can be left unreduced on account of pain and pressure symptoms on the brachial plexus. 3. Resection is more satisfactory, but not ideal or wholly safe. 4. Arthrotomy by the old incisions is tedious, and never has been widely practiced, but has shown good results. 5. Arthrotomy by Andrews' method is simplified and made quicker, as well as safer. It would possibly be as safe as resection, and much more ideal in results.

45. **Artificial Dilatation of Cervix Uteri.**—Knapp reviews the indications and the methods employed for artificial dilatation of the cervix uteri without offering anything new.

51. **New Operation for Correcting Retrodisplacements of Uterus.**—To secure all the advantages of the Alexander operation, and yet to have an operation which could be combined with the median incision and still avoid the creation of pathologic conditions, Barrett advocates the following procedure: The abdomen is opened in the median line, through an incision from one and one-half to two inches in length. Intra-abdominal complications are dealt with. The round ligaments are picked up with the author's rubber-jaw forceps, and a control ligature is thrown around each ligament, from two and one-fourth to two and one-half inches from the angle of the uterus. If they are exceedingly well developed, a longitudinal slit is made over the ligament and the peritoneum not included. The edge of the aponeurosis over the rectus muscle is now grasped close to the lower angle of the wound, and curved ligature forceps are carried between the aponeurosis and the rectus muscle, outward to the natural exit of the round ligament, the internal ring, where the forceps is guided into the abdomen by sight or by means of one or two fingers through the abdominal incision as a guide. It is not difficult to have the forceps follow the round ligament subperitoneally to the control ligature. The forceps now grasp the control ligature, and it is withdrawn, and along with it is a loop of round ligament. Each loop of round ligament, while being held by the control ligature, is sewed to the under side of the aponeurosis with catgut, about one inch from the median line, and should the loops prove long enough, as they frequently do, they are sutured together in the median line over the recti muscles. The round ligament runs from the uterus to its normal exit, the internal ring, then under the aponeurosis to the lower angle of the abdominal incision, close to the symphysis pubis, to the under side of which aponeurosis it is attached one inch from the incision. The ligament now retraces its steps to the internal ring, from whence it follows its normal course to the labium majus. This leaves no opening for strangulation of the bowel. The ligament leaves the abdomen at its normal place and utilizes the normal structures as a pulley for the round ligament. The uterus is now held by the very best part of the round ligament, a ligament which has capacity for evolution during pregnancy and involution thereafter. The nature of the operation has led the author to term it "intramural transplantation of the round ligaments." This operation has seemed to present the following advantages: 1. It may be employed where there are intra-abdominal complications of any extent, and through the best possible opening for dealing with those complications. It is easy of execution through even a very small opening. 3. It creates the least possible pathology, forming no new ligament. 4. It utilizes the very best part of the round ligament, acting through the internal ring. 5. It has shown the highest efficiency in holding the uterus forward and yet allowing the normal range of movement.

52. **New Operation for Phimosis.**—Lespinasse has devised what he calls the bloodless cuff operation. Although the operation is not applicable in inflammatory cases, nor is it applicable to infants, it is still said to possess points of advantage and distinction. There is practically no hemorrhage; the postoperative edema is absent or very slight; it does not entail detention from business, and it removes the wound a goodly distance from the urinary meatus, hence it is easy to keep it uncontaminated. The cosmetic result is excellent. The frenulum is first cut from the glans down until the perifrenular pockets are obliterated and the frenular region is smooth. If the frenulum is thick, it is best to leave a little flap from one of its sides to cover in the defect. If short and thick the area is left to granulate, which it does very quickly. The next incision is circularly around the shaft of the penis through the skin only and paralleling the sulcus about ½ cm. behind it, being careful to avoid the veins. Next a similar incision is made at an equal distance behind the sulcus and paralleling it through the mucous membrane only, being careful to avoid the veins here also. When the prepuce can not be retracted the skin incision is made and the dissection is started from it as usual. As the mucocutaneous junction is approached the stenosis is relieved and the prepuce can be retracted. The mucous membrane incision is made and continued as ordinarily. The distal edge of the skin incision is caught and dissected off from the fascia, keeping very close to the skin. It is a matter of no consequence if the skin is nicked, while it is

a serious slip if some of the large veins are nipped. The incision is continued to the mucous-cutaneous junction, then the prepuce is retracted and the dissection started anew on the proximal side of the mucous membrane incision, continuing it till it meets the skin incision. The cuff is slipped off the penis and the cutting part of the operation is completed. If the incisions have been properly placed the two cut edges lie accurately fitted to each other and only need to be sutured. To obviate the tendency of the skin to in-roll, Lespinasse advises placing, first, a continuous suture of absorbable material very close to the edge of the incision; second, an interrupted suture of a stiff, non-yielding material, as silkworm gut, placed far back and ends cut long, thus preventing in-rolling by its stiffness and bridging action; or the elevation of the cut edges like the sides of a tent with a suture clamp to hold them in place. A gauze strip about 9 inches long and 1 cm. wide is wrapped very tightly around the penis, covering the wound. What is desired is pressure to the limit oozing and edema. Over the gauze a narrow and snugly fitting bandage is applied. A large bandage is passed around the waist, and from this a T is dropped down to the penis, having this T 4 inches wide at least, and long enough to reach the scrotum. The penis is placed upright against the abdomen and the T is so regulated that it will retain it there. The glans is covered with a piece of gauze heavily smeared with zinc salve or sterile vaselin, the patient being instructed to replace it after each urination. If the glans swells and pains because of the constriction of the dressing, gentle, firm pressure with the thumb and index finger will reduce it and quiet the discomfort. The dressing must be changed in twenty-four, or at the most thirty, hours. The gauze strip must be removed or markedly loosened by that time, its function of limiting edema and serious extravasation having been fulfilled and further action would be harmful, possibly causing gangrene.

53. **Prostatotomy versus Prostatectomy.**—Unless the bladder, ureters, kidneys are water-logged, as it were, with toxic material, Barnett considers prostatectomy practically devoid of danger; but when there is marked disability, albuminuria, casts, etc., he considers prostatotomy indicated. After drainage has relieved the body of its poison, a prostatectomy can be done at a second sitting, if necessary, with less danger.

Columbus Medical Journal, Columbus, Ohio.

November.

54 *Observations on Asepsis in General Surgery. W. J. Means, Columbus.
55 Predisposing and Acquired Characteristics of the Alcohol and Drug Habitué. C. D. Mills, Marysville, Ohio.
56 Puerperal Eclampsia. T. L. Cooksey, Wilmington, Ohio.
57 Acne. E. J. Emerick, Columbus.
58 *New Hemorrhoidal Clamp. E. A. Hamilton, Columbus.
59 Proctoscope and Colonoscope in the Diagnosis and Treatment of Diseases of the Large Intestines. W. Teachnor, Columbus.

54. **Asepsis in General Surgery.**—After a careful study of the different methods of sterilization of hands and the wound area, Means has come to the conclusion that a strict aseptic method is the only one on which the surgeon can depend primarily, followed by the use of chemical agents for their inhibitory action. This method consists in thoroughly washing the hands in pure soap and sterile water, treating the nails and rinsing the surface with clean water to remove the soap; then the hands and arms may be submerged in a 1 to 3,000 bichlorid solution or a 1 per cent. carbolic acid solution. The management of the wound area is along the same lines.

58. **New Hemorrhoidal Clamp.**—The clamp devised by Hamilton does away with the tissue which has been clamped and in which sloughing would follow if it was allowed to remain. This clamp consists of slotted blades, 2 inches in length, the blades being at right angle to the handle. The under surfaces of the blades are grooved to a depth even with the upper surface of the slots. This groove is wide enough to exert no pressure of consequence on the base of the tumor. The under surfaces of the blades are rounded to facilitate suturing, and the heel of the instrument is properly smoothed off. The upper portion of the clamp blades above the slots and the groove come together with serrated edges, which give as firm a grasp of the tissues as is needed. The use of the instrument is simple. The usual preliminaries of stretching the sphincters and cleansing the field are attended to; the tumors are brought down to suit the operator's convenience; the clamp is applied parallel to the long axis of the gut and with the heel of the instrument toward the center of the anal orifice; proper pressure is made by the clamp blades; sutures are then passed under the instrument, its rounded under surface felicitating this procedure; a blunt-pointed bistoury or thin scalpel is inserted in the slots and the hemorrhoidal area separated thereby. The clamp with the hemorrhoid is removed and the sutures tied. Either continuous or interrupted sutures are used, usually of catgut of a size suited to the exigencies of a given case. The idea in this instrument is that the lips of the cut surface have not been injured by the crushing of the clamp blades, consequently if proper sterilization of the field has been carried out primary union may be expected here as in any part of the body; and if primary union fails to result, there is no sloughing mass which has to be cared for and healing is advanced by just so much.

Kansas City Medical Index-Lancet.

November.

60 Ulcer of the Stomach. S. C. James, Kansas City.
61 Peculiar Quinin Idiosyncrasy. F. T. Van Eman, Kansas City.
62 Lectures on Nervous and Mental Diseases. J. Punton, Kansas City.
63 Maternal Feeding. J. W. Kyger, Kansas City.
64 Papillomata of the Larynx. W. M. Reed, Kansas City.

Medical Fortnightly, St. Louis.

November 10.

65 Typhoid Fever and Its Treatment. J. A. Simpson, Harriman, Tenn.
66 Diagnosis and Treatment of Incipient Skin Cancer. F. B. Wynn, Indianapolis.
67 Internal Antiseptics. A. L. Benedict, Buffalo.

Journal of the Kansas Medical Society, Lawrence.

November.

68 Treatment of Deformities. J. Naismith, Lawrence, Kansas.
69 My First Fractures. J. D. Clark, Wichita.
70 Therapeutic First Principles. G. H. Hoxie, Kansas City.
71 How to Produce Acid-Fast Bacilli. H. G. Graham, Chicago.
72 Scientific Basis of Medicine. J. T. Axtell, Newton.

Medical Standard, Chicago.

November.

73 Professor Senn and His Clinic. B. Robinson, Chicago.
74 Nicholas Senn, The Man. F. Henrotin, Chicago.
75 Surgical Clinic. N. Senn, Chicago.
76 Dr. Senn's Clinic from a Visitor's Standpoint. O. W. MacKellar, Chicago.
77 Surgical Clinic Held by Prof. Nicholas Senn. G. E. Papot, Chicago.

Journal of the Minnesota Medical Association and the Northwestern Lancet, Minneapolis.

November.

78 Mammary Carcinoma. W. L. Rodman, Philadelphia.
79 End-Results of the Operative Removal of Malignant Growths. A. MacLaren, St. Paul.
80 Shock and Its Treatment. G. R. Curran, Mankato, Minn.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

November 25.

1 Dyspepsia. R. Hutchinson.
2 Education of Physicians in London in the Seventeenth Century.—The Fitz-Patrick Lectures for 1905. N. Moore.
3 *Simple Stricture of the Common Bile Duct Treated by a Plastic Operation. B. G. A. Moynihan.
4 Case of Suppurative Cholangitis Following Cholelithiasis and Cholecystitis. G. M. Harston and W. Hunter.
5 *Portal Pyemia and Pylephlebitis. W. L. Brown.
6 Observations on the Opsonic Index of Patients Undergoing Sanatorium Treatment for Phthisis. H. Meakin and C. E. Wheeler.
7 *A Hitherto Undescribed Change in the Urine of Patients Suffering from Nephritis. M. A. Ruffer and G. Calvocoressi.

3. **Plastic Operation for Stricture of Common Bile Duct.**—Moynihan reports a case of gallstones in which the common duct was obstructed by a cicatricial stricture which was evidently the result of an old ulcer. After the stones had been removed from the duct the second portion of the duodenum was mobilized after the manner of Kocher. The stricture, which had been freely divided by a vertical incision, was then abolished by the approximation of the edges of this incision in a transverse direction. A through-and-through suture of catgut was used, threaded on an intestinal needle. The transverse wound was not completely closed, sufficient room being left for the introduction of two rubber tubes, one of which

passed upward into the dilated common duct and the other downward toward the ampulla. Each tube was fixed with a single catgut stitch. The tubes were removed on the eleventh day. For four weeks all the bile passed through the wound. Some pancreatic juice also escaped in this way, as was shown by the digestion of the skin around the wound. In the fifth week bile began to pass into the intestine, and in the ninth week the wound was entirely closed. The patient was sitting up in bed from the first, and was allowed to get up in the third week.

5. **Portal Pyemia and Pylephlebitis.**—Brown has collected 48 cases, in 7 of which (14.6 per cent.) the occlusion was the result of sepsis. He found that in some cases of portal pyemia obstruction symptoms occur, but in the majority of cases they do not. Their absence, however, can not be regarded as excluding pylephlebitis. Their presence is usually the result of a firmly adherent clot in the portal vein or its annexes, rather than of the soft, disintegrating, purulent thrombus. The commonest place for the adherent clot to form is at the junction of the superior mesenteric and splenic veins. He concludes as follows:

1. A collection of pus within the portal zone is the principal cause of portal pyemia. Ulceration of the alimentary tract is only important as being a frequent precursor of such a collection.
2. Signs of portal obstruction are the exception in suppurative pylephlebitis.
3. There are no signs by which we can distinguish with certainty cases of portal pyemia with suppurative pylephlebitis from those in which the vein is not involved.
4. In "adhesive pylephlebitis" the essential feature is the occlusion of the vein, and this may be produced by a variety of causes, among which sepsis is not an infrequent one.
5. Therefore, if our terminology is to accord with pathological conditions so far as they can be determined during life, we ought to speak of two conditions, portal pyemia and portal occlusion, remembering that we may meet with cases of portal pyemia with occlusion.

7. **The Urine of Nephritics.**—The result obtained by Ruffer and Calvocoressi, in experiments made to ascertain whether pathologic urines contain more or less lysogen than normal urines, shows that the physiologic action of the urine of cases of chronic and diphtherial nephritis, in the large majority of cases, is very different from the action of the same quantity of urine of healthy human beings.

The Lancet, London.

November 25.

8 *Treatment of the Attack in Spasmodic Asthma. A. Morison.
9 *Traumatism as an Exciting Cause of Acute Appendicitis. F. A. Southam.
10 Multiplicity of Complements in Bacteriolytic Sera. W. H. C. Forster.
11 Pathology, Affinities and Treatment of So-called Bleeding Polypus (Discrete Angeioma) of the Septum. L. H. Pegler.
12 *Ethyl Chlorid as an Anesthetic for Infants. F. Murray.
13 Two Cases of Spasm with Hypertrophy of the Pylorus in Infants Cured with Opium. N. Neild.

8. **Treatment of Attack in Spasmodic Asthma.**—Morison describes his treatment of the attack in spasmodic asthma as carried out frequently and always with success. The principle of the treatment is to aid the patient to empty the chest of air. With one hand on the back and the other on the front of the chest, Morison empties it at the end of each inspiration. After several maneuvers of this kind relief is given. Even in old people with stiffened chests he has found compression by one hand over the thorax and the other over the epigastrium, the lower ribs, or preferably over the right hypochondrio-epigastric region, give relief from the thoracic anxiety attending the fixation of the chest, which is chiefly inspiratory. It is unnecessary to give any drugs.

9. **Traumatism as Cause of Appendicitis.**—Southam cites 4 cases illustrating the fact that a direct injury may excite an attack of acute appendicitis when a concretion is present.

12. **Ethyl Chlorid Anesthesia for Infants.**—Murray regards ethyl chlorid as one of the best means of producing anesthesia of from five to fifteen minutes' duration in infants and older children. She has administered ethyl chlorid to 150 infants under a year old. The youngest patients were five and fourteen days old respectively, and a large proportion of them were from five to seven weeks old. Many of them had not undergone any preparation at all, and the only precaution taken with regard to the others had been to withhold food for some hours that morning. The use of ethyl chlorid in prolonged operations is not recommended, partly owing to the waste of the drug by evaporation, and partly because it has no special advantage over chloroform and the A. C. E. mixture when a narcosis of from twenty to forty minutes is required. Murray has found ethyl chlorid very suitable for tenotomy, circumcision, empyema, and the removal of adenoids, cysts, polypi, dermoids and nevi. Murray says that the simplest form of inhaler is the best to use; a useful one consists of an ordinary shaft on to which the face-piece and bag fit; the free end is closed by a stopper attached by means of a fine chain and the anesthetic is sprayed through this opening. To the end of the shaft which enters the bag two curved wires are fitted, so adjusted as to make a little cage in which a small sponge is placed. When ethyl chlorid is sprayed into a bag of the usual size, part of it vaporizes and the other part tends to fall to the bottom and to vaporize as the patient breathes in and out. A young infant does not make a sufficient respiratory effort to produce the necessary amount of vaporization and for this reason induction is often unduly delayed and the anesthesia is not smoothly maintained. The sponge inside the bag intercepts the anesthetic and by holding it nearer to the child obviates these defects, making it possible for the patient to inhale it more rapidly and without effort. The same result is obtained if a bag of about half the usual size is employed, but it is not always convenient to change the bag between the cases. A celluloid face-piece is generally preferable since it not only permits the anesthetist to observe the patient more readily, but also resists the action of the vapor better than rubber. For infants of a few days or a few weeks old Murray commences by spraying 3 c.c. into the inhaler; for those of six months and upward she gives 5 c.c. at once. The mask is then approached to the face but not pressed against it, so that the baby has several breaths of air and vapor mixed; it is then more closely applied so as to exclude all air except that which is already in the bag, and in a few seconds the child becomes unconscious. When one is sure that the anesthesia is deep, and the surgeon has made his incision or begun the operation, the mask should be removed from the face and a few breaths of air should be given. If it is desired to continue the period of narcosis for some time the mask should not be kept off for long, but only raised occasionally for air. If the respiration indicates the lightening of the narcosis a few more cubic centimeters may be added to the bag; on these lines the anesthesia may be prolonged indefinitely.

Glasgow Medical Journal.

November.

14 Case of Precocious Development. J. Devon.
15 *Treatment of Smallpox by Ichthyol. A. Love.

15. **Ichthyol in Smallpox.**—Love describes the results obtained in the treatment of smallpox by ichthyol. The ichthyol was given in doses of 40 grains, administered in the form of chocolate-coated tabloids, three times in the twenty-four hours. In a certain proportion of cases ichthyol was also applied externally in the form of an ointment. The action of the drug was observed in 100 patients, of whom 67 were males and 33 were females, their ages ranging between 3 and 60 years. The treatment was commenced as soon as the patient was admitted to the ward, and was continued until he was sufficiently convalescent to leave his bed. Of the total cases treated 6 patients (or 6 per cent.) died, but the cases were not selected in any way with regard to severity, although it is probable that the action of the drug would have been better estimated in cases of considerable severity than in those of a milder character. In 30 out of the total nuhmber of cases the eruption was sparse; in 63 it was abundant, and in 5 it was confluent, while in 2 it was hemorrhagic in character. With regard to vaccination, 4 patients were unvaccinated, but in two of these vaccination had been attempted unsuccessfully in infancy. In none of the cases observed was there any indication that the drug influenced the disease as regards either its course or severity. That pustulation was not affected in any way is shown by the fact that nearly all the cases ran a full course, and by the incidence of abscesses in some during convalescence. The course of the eruption, as well as the complications and sequelæ, were precisely those seen among smallpox patients who have not been subjected to any special treatment. The two patients in whom the eruption aborted were

persons who had been well vaccinated in infancy, a considerable degree of immunity being thus indicated, and whose eruption at the time of admission was of a small, dry character usually associated with a modified development of the rash. In a certain proportion of the cases ichthyol was applied externally in addition to the internal administration. The upper limbs were usually chosen for this purpose, because of their accessibility, and the ichthyol was applied by wrapping the arm in lint which had been thickly smeared with the preparation. The effects of this external application were as disappointing as those resulting from the internal administration; indeed, in most cases the stages of maturation and crusting were delayed on the limb treated, the pustules remaining soft and crusts forming tardily.

Annales des Mal. des Org. Gén.-Urin., Paris.

Last indexed page 1830.

16 (XXIII, No. 13.) Etude de l'histologie pathologique des suppurations testiculaires. E. Dalous.
17 (No. 14.) La cystoscopie à vision directe. G. Luys.
18 Recherches sur la sécrétion et l'excrétion des reins malades (diseased kidneys). F. Cathelin.
19 (No. 15.) Les blenorragies aberrantes. Jullien.
20 Varicocèle et obsession. L. Picqué.
21 (No. 16.) Inflammatory stricture of Posterior Urethra.—Rétrécissement inflammatoire de l'urèthre postérieur. E. L. Keyes (New York).
22 Nouvelle méthode de cystoscopie. Cystoscope à air et a vision directe, sans partie optique avec lampe renversée au plafond. F. Cathelin. Id. M. Weinrich.
23 (No. 17.) *De la prostatectomie secondaire à la cystostomie. André.
24 *La fibrinurie. L. Imbert.
25 (No. 18.) *Operative Injury of Ureter.—Traitement des blessures de l'uretère au cours des interventions chirurgicales. F. Bernasconi and S. Colombino.
26 Les fistules urétro-rectales consécutives à la prostatectomie perinéale. Rochet (Lyons).
27 (No. 19.) Recherches sur les lymphatiques de la prostate humaine. Caminiti (Naples).
28 L'urotropine et l'helmitol. Leur action thérapeutique d'après les résultats des recherches expérimentales et des observations cliniques. F. P. Guiard. (Commenced in No. 7.)

23. **Prostatectomy Secondary to Cystotomy.**—André has performed prostatectomy in 24 cases, and in 3 it had been preceded by cystotomy. The intervals were two months, one year and two years respectively. After the bladder had been treated the patients regained strength so that an operation on the prostate became practicable. The general health forbade it at first. His patients were from 65 to 70 years old.

24. **Fibrinuria.**—Imbert reports 3 cases in which the urine contained fibrin or fibrinogen, independently of hematuria or chyluria. He has been able to find only 9 similar cases reported in the literature. The fibrinuria seems to be connected with some kidney affection, but the latter is extremely variable. Treatment is purely symptomatic, hot baths, injections, laxatives. A milk diet and potassium oxalate did not seem to produce any effect in his cases.

25. **Treatment of Operative Injury of the Ureter.**—Experimental research on dogs has shown that excellent functional results can be obtained from an anastomosis between the ureters, implanting one in the other, in case of injury to one. The various steps of the procedure are illustrated as performed on large dogs and on cadavers.

Presse Médicale, Paris.

29 (No. 85, Oct. 21.) Les consultations de nourrissons (infant consultations). L. Devraigne.
30 *Le traitement du psoriasis par les maillots de pommade (salve tights). L. M. Pautrier.
31 (No. 86.) *La diathèse d'autoinfection. A. Gilbert.
32 Bromatologie clinique du riz (of rice). A. Martinet.
33 (No. 87.) La structure de la glande surrénale normale de l'homme (suprarenal). L. Bernard and Bigart.
34 Appareil pour irrigations urétrales, vaginales et rectales chaudes, démontable et transportable, thermo-laveur (portable apparatus for hot irrigations). D. Estrabaut.
35 (No. 88.) *L'isolement pratique des tuberculeux dans les hôpitaux. H. Barth.
36 *Traitement sérothérapique du goitre exophthalmique. Hallion.
37 Tetanus neonatorum et son traitement. G. Miron.
38 *Enquête sur l'alimentation de 100 ouvriers, etc. Parisiens. L. Landouzy and M. Labbé.
39 (No. 89.) *The Rôle of Forests and Soil in Development of Bacillosis.—Du rôle des forêts et de la constitution du sol dans le developpement de la bacillose en France. R. de Gaulejac.
40 Paralysie des nerfs moteurs de l'oeil chez les diabétiques (paralysis of oculomotors). Dieulafoy.
41 *Héroine et héroinomanie. P. Sollier.

30. **Psoriasis and "Salve Tights."**—For several years Brocq has adopted the practice of having his psoriasis patients put on at night a union suit or tights, to cover the entire body after it has been thoroughly smeared with the proper salve. The salve is rubbed all over the sound skin as well as into the patches of psoriasis, and the patient thus sleeps in an actual bath of salve. The salve-impregnated union suit can be taken off during the day if desired, but is worn every night. He has found that this method materially shortens the duration of treatment, while the drugs can be much less concentrated than when applied by other technics. His favorite formula for the purpose is 15 gm. of oil of cade with 85 gm. of glycerite of starch, made into an emulsion with green soap and oil of cloves. He uses a stronger concentration when only the patches are treated.

31. **Diathesis of Autoinfection.**—Gilbert remarks that all the passages leading out of the gastrointestinal tract generally contain bacteria, but that these are the species normally found in the intestine. The anaërobic varieties predominate in the depths of the passages, and are always waiting for something to reduce the vitality and resisting powers of the tissues in which they are lurking, when they proceed to set up an inflammation. Appendicitis, inflammation of the gall bladder and gallstone formation are all the work of the germs normally in the intestines, as also pancreatitis and certain other affections. The predisposition to inflammation in these circumstances he calls the "diathesis of autoinfection." He gives a long list of the affections that may result directly from it. They include gallstones, cirrhosis of the liver, angio-pancreatitic sclerosis, appendicitis, and probably also mucomembranous enteritis, icterus, stomatitis, tonsillitis and acute articular rheumatism. There is also a long list of affections which follow in the train of the foregoing, such as diabetes, neurasthenia, hysteria, gout, etc.

35. **Practical Isolation of the Tuberculous in Public Hospitals.**—Barth refers to the sweeping regulations decreed by the Paris authorities a year or so ago in regard to the isolation of tuberculous inmates of the hospitals. The regulations were chronicled in THE JOURNAL at the time; they called for the setting apart of certain hospitals exclusively for the tuberculous. These regulations have never been enforced, and tuberculous patients continue to be scattered through the wards of some of the hospitals now as before. Barth has organized a practical system of isolation in the Necker Hospital which apparently answers all the purposes without any commotion. He assigns to the "open cases" of pulmonary tuberculosis a certain part of each ward. Another section is set apart for patients entirely free from tuberculosis, and no tuberculous person is allowed to enter this section except possibly those who show no tendency to cough or spit. Certain spaces are isolated with glass walls about eight feet high, and these are reserved for the doubtful cases and for those too feeble to observe the "discipline of the cuspidor." These isolating compartments are disinfected whenever they change inmates, and the main ward is cleaned morning and evening with damp cloths. The spittoons are filled with a carbolized fluid and each has a cover. They are emptied and boiled each day. All who cough are given pieces of paper which they hold before the mouth when coughing and then throw into a special receptacle. The consumptive knows that he will be sent away from the hospital if he enters the part of the ward devoted to the non-tuberculous or spits on the floor. Bacteriologic examination has been made daily of the nasal secretions from several of the non-tuberculous inmates, selected at random here and there through the wards, even close to the tuberculosis section. No tubercle bacilli were found during the two months in which these examinations were made.

36. **Serotherapy of Exophthalmic Goiter.**—Hallion reviews the history of this subject, claiming for Ballet and Enriquez priority for the application of serotherapy to this disease in 1894. They were followed by O. Lanz, who used the milk of goats after removal of the thyroid gland, while Moebius gives the serum of sheep after thyroidectomy. All have found that fully as good results were obtained when the serum was given by the mouth as when it was injected subcutaneously. Hallion prefers the blood of sheep or horses, as these animals seem to be better adapted for serum purposes than the carnivora.

Their blood can be used a month after thyroidectomy, and he utilizes the entire blood, believing that possibly the essential curative principle may be connected with the figured elements of the blood. He adds glycerin to preserve the blood, and orders one or two teaspoonfuls a day before meals. Larger doses have not caused any inconvenience, but do not seem to be more effectual than the smaller ones. Enriquez gives three teaspoonfuls a day for one week, then three dessertspoonfuls, and then three tablespoonfuls. The results are sometimes very rapid and striking. The improvement in the patient's condition is unmistakable as the tachycardia and tremor subside. The exophthalmos is more refractory. Secondary affections and complications are also favorably affected at the same time. Breton observed a hemorrhagic pleuritis in a patient with exophthalmic goiter which was evidently arrested by the serotherapy as the general condition improved. The goiter in the exophthalmic variety is less responsive to serotherapy than the typical triad of symptoms.

38. **Food of Paris Working People.**—Landouzy and Labbé presented to the Tuberculosis Congress a large table showing the details of the average diet of 100 men and women of the laboring classes, selected from the applicants at the Laennec Hospital. Lassalle claims that "the social question is a question of the stomach," but that there is a lack of wise provision for the diet of human beings, although stock raisers have reduced it to a science for their animals. To remedy this state of things a society has been formed at Paris, Société de Hygiène Alimentaire, which aims to study the questions in regard to diet from every point of view, and to teach and popularize the lessons learned. The practical study of rational feeding to preserve health, to maintain strength and to ensure the highest working capacity, at the minimum of expense, Landouzy believes, will prove certainly one of the most effectual forces at our command in arresting the spread of tuberculosis. More than this, education in household matters, "domestic education," is one of the best safeguards of both the physical and moral health of a country, as was explicitly stated in one of the resolutions adopted by the International Tuberculosis Congress.

39. **Forests and Tuberculosis.**—Gaulejac shows by statistics that the forest regions of France are less affected by tuberculosis than others. The purity of the air, the rapidity with which the organic waste matters are destroyed by the multiple, purifying functions of the trees, the properties of the essences exhaled by certain trees, all these, he states, supplement the more natural life lived in or near the forests.

41. **Addiction to Heroin.**—Sollier asserts that heroin is proving more toxic than morphin and that addiction to heroin—which is becoming comparatively frequent—entails greater physical and moral havoc than addiction to morphin. In treating 120 cases of morphin addiction he has never had occasion to return to the morphin more than three or four times, and then only from excess of prudence, fearing possible syncope. The syncope in treatment of morphin addiction comes from heart weakness, and if all extra demands on the heart are avoided, there need be no fear of it. In heroin addiction, however, the syncope is respiratory, of bulbar origin. It does not yield to a dose of heroin as the syncope yields to morphin in morphin addiction. If the ordinary measures to restore bulbar action prove ineffectual, the patient is liable to succumb. The only way to avoid danger from this source is to substitute morphin for heroin in treating heroin addiction. After the patient is under the effects of morphin, then treatment as for morphin addiction is commenced. Sollier cites some instances of the baleful effect of heroin, which he affirms should be thrown out of the pharmacopeia, and adds that there will probably be similar experiences before long with dionin addiction. He already knows of a few instances.

Semaine Médicale, Paris.

42 (XXV, No. 45, Nov. 8.) *Mode of Death in Scopolamin-Morphin Anesthesia.—Comment on meurt dans l'anesthésie générale par la scopolamine-morphine. De Maurans.

42. **Death in Scopolamin-Morphin Anesthesia.**—When this mode of anesthesia was introduced into France De Maurans called attention to the 12 cases in which death had occurred during the anesthesia, and for which the anesthetic was probably responsible. He now cites 10 more fatal instances, and analyzes the reports of them published by the various surgeons. His conclusion is to the effect that any one "using this notoriously unreliable and dangerous technic incurs a heavy responsibility." Experimental research has confirmed the findings in the clinic. The method is merely the revival of the atropin-morphin technic which was abandoned long ago, although atropin is a more stable product than scopolamin. (See Answers to Correspondents, December 9, page 1817.)

Berliner klinische Wochenschrift.

43 (XLII, No. 41.) *Ueber individualisierende diätetische Behandlung der Gicht (gout). C. von Noorden and L. Schlep.
44 *Die Pathologie des Trachoms. W. Goldzieher.
45 *Ueber thoracale Ostealgien. P. Hampeln.
46 Zwei Geschwisterpaare mit Friedreich'scher Krankheit (four cases in two families). K. Mendel.
47 *Superficial Cancer Cured by Exposure to Sunlight.—Heilung eines Haut-Epithelioms durch direkte Sonnenbestrahlung. M. Hirschberg.
48 Accompanying Delirium.—Begleitdelirien. Rauschke.

43. **Diet in Gout Based on Tolerance.**—During the two years in which von Noorden has made a special study of the tolerance of gouty patients for food containing the purin bodies, he has learned that there is a great difference in individuals in this respect. He put his patients first on a diet free from purin bodies, and determined the proportions of endogenic uric acid. He then gave 400 gm. beef (weighed raw) on two successive days, giving 150 gm. at breakfast and 250 gm. at noon. About 0.24 gm. of purin bodies can be estimated for each 400 gm. beef. About 50 per cent. of the purin bodies vanish in the organism, either from oxidation or from lack of assimilation, but the remaining 50 per cent. may be expected to be eliminated in the urine as uric acid or purin bases. During the two days, therefore, the proportion of purin nitrogen eliminated from the 0.24 gm. purin bodies ingested each day should amount to a total of 0.24 gm. demonstrable in the urine, equal to 0.72 gm. uric acid. The elimination generally occurs during the two days of the test, but may be prolonged under normal conditions into the day or so following. In case of gout, however, the elimination drags on for several days, and the total output is much less than that of normal subjects. We learn by this test whether the gouty patient is able to tolerate this amount of the purin bodies. If he can, there is no reason why he should not be allowed them, but if not, then the amount of purin-containing food must be reduced to ward off retention of uric acid and attacks of gout. It was sometimes found that a smaller amount of the purin bodies was well taken care of by the gouty patient, who had shown himself unable to cope with the original 400 gm. of meat. The amount of uric acid eliminated increased after ingestion of 200 gm. of meat, the total amount being much higher than after ingestion of 400 gm. of meat. The details of a typical case are tabulated. The patient, a man of 55, eliminated an average of 0.462 gm. of uric acid when not ingesting any purin-containing food. After two days of 400 gm. of meat each, he eliminated from 0.458 to 0.544 gm. of uric acid. He was then given 200 gm. of meat, and the amount of uric acid eliminated rose to 0.655 and 0.647 gm. on the folowing days. This patient, therefore, was allowed to eat meat freely to the amount of 200 gm. a day. Larger amounts would certainly have entailed retention of uric acid and attacks of gout. The tolerance of gouty individuals should be determined just as we determine the tolerance of diabetics. In both cases, however, the tolerance is not an invariable figure; it varies in the course of the disease, and these variations should be supervised and the diet modified to correspond. In von Noorden's experience, while the intake of purin bodies was thus regulated, the therapeutic results attained far surpassed those observed with any former method of treatment, either dietetic or medicinal.

44. **Pathology of Trachoma.**—Goldzieher remarks that bacteriology has not afforded much aid in the study of trachoma but that the history of the affection shows an unmistakable connection with gonorrhea, as he relates in detail. He does not affirm that blenorrhea and trachoma are identical, but asserts that there are certain forms of chronic, infectious inflam

mations of the eyes, originating in blenorrhea, which it is impossible to differentiate from trachoma. The diagnosis of trachoma should not be based on the granulations alone, but on the evidences of infectiousness and on the long duration of the process.

45. **Thoracal Ostealgia.**—Hampeln has observed cases of ostealgia affecting the body of the sternum, the xiphoid process, or the false ribs. The pains in the first group suggest those of angina pectoris. In all, the bones seem to be the seat of continuous or paroxysmal, and sometimes radiating pains, and display sensitiveness to pressure. In some of the cases a tendency to gout was probable, but in others the signs were those of a general neurosis. In a considerable proportion of the cases there were no indications of any other affection, and consequently the ostealgia must be referred to an unusual sensitiveness of the bones in question. Since he has been studying the subject he has found that many apparently healthy persons feel pressure on certain ends of bones or bony processes as pain, although previously unconscious of this sensitiveness on the part of the bones. He regards this disposition to painfulness as almost physiologic for certain bones. In times of increased irritability, hysteria or neurasthenia, this predisposition may be magnified into actual ostealgia.

47. **Cure of Superficial Epithelioma with Sunlight.**—Hirschberg relates that he spent a month last winter at Caux, on Lake Geneva, at an altitude of about 3,400 feet. He had long had an epithelioma on his ear, which measured about 1.5 cm. by 0.5 cm., but after two weeks of out-of-door life among the mountains he found that the epithelioma was being cast off. He then exposed it more systematically to the sunlight, and by the end of the month nothing was left but a minute bunch which he easily removed by cauterization after his return. The ear is now entirely normal; there have been no signs of recurrence during the eight months since. He urges the establishment of open sun-resorts among the mountains for this purpose, the solarium being open to the sun and air, as glass prevents the passage of most of the ultraviolet rays. If Boubnoff's experiences are confirmed by others, the light treatment can be much simplified. Boubnoff announces that ordinary woolen and cotton clothing does not prevent the passage of the chemical rays. They pass more readily through the uncolored than colored fabrics. Of the colored fabrics blue allows more of the rays to pass than other colors, and black least of all. His experiments were made with diffuse daylight; the results would probably be better with direct sunlight.

Centralblatt für Chirurgie, Leipsic.

Last indexed page 1611.

49 (XXXII, No. 38.) *Klinische Beobachtungen ueber Glykosurie nach Ather-Narkosen. R. Röhricht.
50 Ein neues Modell einer Rippenschere (rib shears). J. Schoemaker (Hague).
51 (No. 39.) Zur Behandlung des Angioma arteriale racemosum der Schädeldecken (of skull). A. Krogius (Helsingfors).
52 Eine neue Beckenstutze (support for pelvis). J. Finck (Charkow).
53 (No. 40.) Zur Technik der Sehnennaht (tendon suture). Wilms and Sievers (Leipsic).
54 (No. 41.) Bemerkungen zur Resektion der Wurmfortsatzes (appendix). Th. Kölliker.
55 Recovery After Extraction of Bullet from Posterior Wall of Heart.—Schussverletzung des Herzens. Z. v. Manteuffel (Dorpat).

49. **Glycosuria After Ether Anesthesia.**—Röhricht has examined the urine of 100 patients after operations on account of cholelithiasis, struma, osteomyelitis, elephantiasis, cancer, hernia, varices, etc. Glycosuria was observed in one or more of each group, the total being 12 cases. Only one of the patients was under 20 and none over 60. Of the 12 positive cases, 8 were men. Only one out of 9 other patients who had undergone major operations under local anesthesia showed glycosuria, while it was not detected in 22 other patients after traumatism without anesthesia. On the other hand, out of 6 patients who had been anesthetized with ether, without an operation, 2 exhibited spontaneous and one alimentary glycosuria.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

56 (XXXI, No. 42.) *Zur Kenntnis der Spirochæte pallida. F. Schaudinn.
57 Ueber einige neue örtliche Anaesthetica (Stovain, Alypin, Novocain). H. Braun.
58 Aetiologie und Statistik der primären Iritis. A. Gutmann.
59 *Ein Verfahren zur biologischen Unterscheidung von Blut verwandter Tiere (to differentiate blood from closely related animals. Uhlenhuth.
60 Zur Frage der Herkunft des Fruchtwassers (origin of amniotic fluid). D. Grünbaum.
61 Zur Pseudo-Influenza-Frage. W. Korentschewsky.
62 Zur Kasuistik des Intentions-Tremors bei Kindern (tremor on voluntary movement, in children). E. Urbach.
63 Fermente und Toxine. C. Oppenheimer.
64 *Distribution of Typhoid Fever.—Die Verbreitung des Unterleibstyphus. A. Gottstein.

56. **Flagella of Spirochaeta Pallida.**—Schaudinn gives illustrations of the principal spirochetes and states that the pallida is the only one he has yet discovered which sometimes has a flagellum at one or both ends. In one instance he found two flagella at one end and one at the other. The old Loeffler bacterial flagellum stain shows them up best. Some of the other varieties of spirochetes have an undulating membrane, but he has never found this in the pallida. On account of these differences in the latter, setting it apart from the genus spirochæta as well as from the spirillum, he suggests that it is evidently a new genus and proposes the name of Spironema for it.

59. **Further Improvement of Biologic Test for Blood.**—Uhlenhuth relates experiences which demonstrate that the biologic precipitation test is the most delicate means at our disposal to detect relationships between animals and birds. It shows the close "blood relationship" between hens and pigeons, between rabbits and hares, and so on, and it may solve interesting questions in racial differences between human beings. He describes a method of "crosswise immunization" which shows that the rabbit organism, for instance, is able to form precipitins active against the blood albumin of the closely related hare. He also shows that it is possible by this means to differentiate the blood of each species from that of the other with mathematic precision. He injected his rabbits with a solution in physiologic salt solution of dried hare's blood fully four years old. The serum of the animals soon showed pronounced precipitating power in respect to hare's blood.

64. **Typhoid Fever in Prussia.**—Improved methods of caring for typhoid patients have reduced the mortality in a constant ratio from 2.64 to 0.81 per 10,000 inhabitants since 1887. Gottstein comments on the rapid spread and rapid extinction of the typhoid epidemics, most of them being restricted to a few weeks, even the famous one at Gelsenkirchen in which 11,357 cases occurred in 1901. This epidemic appeared and subsided within a few weeks. The largest number of cases of typhoid in places where the disease is endemic does not always occur in July, August and September, but is sometimes observed in February and March. An increase during the late summer is frequent, but is not an essential characteristic of a typhoid epidemic. He remarks also on the way in which certain districts suffered from typhoid during the summer of 1905. They were mostly industrial regions where the disease is more or less endemic, but even in Berlin the number of cases of typhoid, which was 45 in 1904, during last summer reached the total of 113. Throughout Prussia there were 1,475 cases, while in the preceding summer there had been only 1,092.

Münchener med. Wochenschrift, Munich.

65 (LII, No. 41, Oct. 10.) *Zur Diagnose, Prognose und Therapie der Herzkrankheiten (heart affections). G. Treupel.
66 Action of Sunlight on Fluorescent Substances.—Einwirkung des Sonnenlichtes auf fluoreszierende Substanzen. Edlefsen.
67 *Explanation and Rational Treatment of Habitual Constipation.—Erklärung und rationellen Behandlung der chron. habituellen Obstipation. A. Schmidt (Dresden).
68 Ueber Cysten-Bildung aus Resten des Processus Vermiformis (cyst formation in relics of appendix). P. Klemm.
69 Intra-abdominale Netz-Torsionen (of omentum). O. Simon.
70 Acarus in Transmission of Leprosy.—Spielen die Kratzmilben eine Rolle bei der Verbreitung der Lepra. E. v. Bassewitz.
71 Fall von äusserster Pulsverlangsamung (intervals of 10 seconds after 3 pulse beats, maintained for 50 hours). A. Frey.
72 *Eye Affections Due to Autointoxication.—Augenerkrankungen durch Autointoxikation. Elschnig (Vienna).

65. **Heart Affections.**—Treupel's address is the final summary of a postgraduate course on this subject. In determining the size of the heart and its parts, he has found orthodia-

graphic examination of the heart—as F. Maritz of Greifswald has worked out and perfected the technic—a great progress in this line. (Moritz' communications on the subject have been mentioned in THE JOURNAL from time to time. His latest article opened volume LXXXII of the *Deutsches Archiv f. klin. Med.*, 1905.) In conclusion Treupel announced the extremely satisfactory results of resection of the ribs in a case of extensive obliteration of the pericardium and adhesion of the heart to the thorax wall, which had been demonstrated before the operation. The patient was a man of 29 who had presented symptoms of heart trouble since an attack of articular rheumatism at 17, and had been treated for nephritis a year before. During the last few months he had experienced oppression in the heart region which increased toward evening and caused great distress and agitation. His sleep was very restless, even under morphin. There were no indications of disturbance in compensation, no edema or ascites, but waves were evident in the jugular veins and there was a positive venous pulse. The heart was excessively large, bulging out the chest wall. The mitral murmur was loud, systolic, almost musical, while the aortic murmur was diastolic, prolonged and gushing. The varying relations between the heartbeat and the carotid and radial pulse are shown in several diagrams. The heart action was moderately rapid, and occasionally the carotid pulse occurred synchronously with the retraction of the chest wall over the heart. In spite of rest, ice, digitalis and morphin, the subjective disturbances were not improved, and part of the chest wall over the heart was removed. This relieved the patient to a remarkable extent and he is now able to sleep well. About 7 cm. were resected from the fourth and fifth ribs over the heart, disjointing them from the sternum.

67. **Agar in Treatment of Habitual Constipation.**—Schmidt believes that chronic constipation in certain cases is due to the unusually good digestion and utilization of the food, leaving so little residue to be passed along that the intestines are not incited to peristaltic action. The residue being so small, there is very little putrefaction, not enough to stimulate the intestines to peristalsis by the gases and other products evolved. The feces in chronic constipation of this kind are hard, solid lumps, with little odor, and show few indications of fermentation or putrefaction. Aside from the difficulty in defecation and the accessory neurasthenic general manifestations, such individuals rejoice in undisturbed good health, not disturbed by gas formation or other phenomena suggesting excessive putrefaction. Such patients can take, without much reaction, a purgative which would cause protracted diarrhea in others. Even when entire wheat bread, salads, fruits or nuts are eaten in abundance, he states, the constipation persists, as the digestive organs are able to digest the cellulose more or less and the stools remain hard and scanty. What is needed is something that will increase the bulk of the stools and make them softer, more watery and less compact. Schmidt thinks that this result may be obtained with agar agar. It contains 0.6 per cent. cellulose, and when it swells up in water it gives up the water very slowly and is not modified by putrefaction. Bacteria do not liquefy agar. He has been experimenting with it and found that it answers the purpose very well. He uses the kind that comes in long strips, and flakes and cuts it up into small bits, like scales. It swells in the mouth and still more in the stomach, and appears unmodified in the stools. The stools become softer and more watery, and are usually passed much more readily. The agar does not irritate the alimentary canal in the least (as much as 25 gm. of the dry agar were taken daily in some of the tests without disturbance). When ingested in the form of a powder it is liable to cause diarrhea and occasionally colic, probably from the more rapid and intense swelling of the agar. The stools become soft and copious, but the intestines have been so long accustomed to the constipation that they do not respond readily to stimuli. Consequently, although the stools have the normal aspect they are not passed spontaneously in every case. To remedy this he adds a very small amount of a 25 per cent. aqueous extract of cascara to the agar—not enough to have a purgative action, but merely enough to supply the stimulation realized by the natural putrefaction in normal stools, but missing in these cases. He has treated 25 patients with chronic, habitual constipation on these principles, and essential and permanent improvement was obtained in every instance. Fluid paraffin is the only other substance which he has found with similar properties. He has given as much as 30 gm. a day of the paraffinum liquidum of the German pharmacopeia without disturbances, and has also had favorable experiences with white and yellow vaselin. This also requires a little 10 per cent. cascara extract to ensure spontaneous defecation. The agar is taken more readily than the vaselin by the patients, even when the latter is given in capsules. Some of the vaselin is evidently assimilated. In an illustrative case cited, the patient passed 38 gm. of hard, dry stools in three days on a test diet. During the three following days he ingested 66 gm. of the dry agar scales and passed in these three days 87 gm. of feces with more than twice as much cellulose as during the preceding period. The agar not only passed unmodified, but it prevented to a certain extent the abnormal utilization of cellulose. Agar has no taste at all. A teaspoonful to two tablespoonfuls are taken during the day in apple sauce or something of the kind, a total of 1.5 to 8 gm. It has to be taken regularly day after day, and in the severer cases its action must be supplemented by other measures. Its sphere is mostly in the mild and moderately severe cases, either of the atonic or spastic varieties.

72. **Eye Affections Due to Autointoxication.**—For ten years Elschnig has been making a special study of gastrointestinal autointoxication in the etiology of ocular affections. It is especially important as a cause of interior ophthalmoplegia, more rarely of paralysis of the external muscles of the eye and affections of the optic nerve. He thinks that it is also a cause of affections of the cornea and sclerotic, recurring keratitis, scleritis and periodical episcleritis, and affections of the uveal tract, especially in recurring iritis and many cases of insidious iridocyclitis. In certain cases of the latter groups there are symptoms of inherited lues, but antisyphilitic treatment gives negative results. It is more than probable that the inherited lues has caused changes in the digestive tract which predispose to gastrointestinal autointoxication. In all these eye affections, dietetic and therapeutic measures to regulate the digestive tract essentially improved or cured the eye affections after failure of all other forms of treatment.

Sei-I-Kwai, Tokyo.

Last indexed page 79.

73 (XXIV, No. 5.) *Operative Treatment of Aneurisms. T. Kikuchi. (Commenced in No. 4.)
74 (No. 6.) Casualties of Japanese Fleets in the Great Naval Engagement of the Japan Sea.
75 Statistics of Russian Prisoners Taken to Japan and of Those Admitted to Hospitals.
76 (No. 9.) Cultivation of Bacillus of Soft Chancre. I. Yamaguchi. (Commenced in No. 6.)

73. **Operative Treatment of Aneurisms.**—Kikuchi is surgeon general of the Japanese army, and in his experience in the field he evolved a method of treating aneurism which proved remarkably simple and reliable. On consulting authorities he found that it was much like Sime's modification of Antyllus' technic. He had occasion to observe 58 cases of aneurism, the result of bullet wounds during the war. The femoral artery was involved in 18 and the popliteal in 9, the subclavian in 5 and the brachial in 8 cases. The advantages claimed for his technic are that the operation is materially shortened and simplified, and the part of the vessel resected is comparatively small. The main artery is not ligated, but merely the afferent and efferent vessels belonging to the aneurism with their branches. A tourniquet is applied to the limb and the aneurism is exposed, incised, evacuated and wiped dry. The bullet hole generally faced the center of the body of the tumor, and it was always found to be the source of the hemorrhage. In doubtful cases a bougie may be passed through it. The part containing the hole is then tied off and resected, and the injured parts of the wounded vessel are tied off and resected on the inner side of the sac membrane.

Medizinskoe Obozryenie, Moscow.

Last indexed XLIV, page 1818.

77 (LXI, No. 12.) *Splenectomy for Hydatid Cyst.—Ekhinokokkovaya bolyezn v. Krymu. A. T. Kablukoff.
78 Liver Cysts of Non-parasitic Origin.—Kist petchenl, etc L. A. Divavin.

79 Formalin Pigment and Its Extraction from Tissues.—Formalinovii pigment i izvletcheniya ego iz tkanei. V. S. Dyevitzky.
80 (LXII, No. 13.) *K kazuistikye oslozhnenii aneurizmi aorti. V. F. Reisgoff.
81 2 Slutchaya symptom-complexa Adams-Stokes' a. O. P. V. Panfiloff.
82 (No. 14.) Treatment of Nasal Polyps.—K utcheniyu o tak. naz. "choanalnykh polypakh." Radtzikh.
83 Pathogenic Influence of Yeast Fungi.—Experimentalnoe izslyedovanie pathogennago vliyaniya drozhzhevykh gribkov na organizma. N. A. Solovieff.
84 (No. 15.) Study of Seven Cases of Leprosy at Moscow. Sem slutchaev prokazy, etc. V. Samgin.
85 *Extragenital Syphilis.—Ryedkii slutchai vnyepolovogo zarazhenii syphilisom. Blanche de la Roche.
86 (No. 16.) Multiple Hydatid Cysts in Abdomen.—Mnozhestvennie echinokokki bryushnoi polosti. A. T. Kablukoff. Six cases.
87 Congenital Fistula Between Bladder and Umbilicus.—Puzirnopupotchnaya vrozhdennaya fistula. Vasilieff.
88 (No. 17.) *Tumor in Cerebellum of Boy of 9.—Opukholi mozzhetchka v dyetskom vozract. I. Y. Vinokuroff.
89 *Differentiation of Noma.—O raspoznavanii vodnyanogo raka shtcheki u dyetei. A. A. Kissel.
90 (No. 18.) *New Operation for Total Symblepharon.—Novii sposob operatzii pri symblepharon totale. N. G. Pravosud. Illustrated.
91 Radical Vaginal Method of Removing Uterine Fibromata.—Rad. vlagalishtchnii sposob op. udaleniya fibrom matki. V. V. Uspensky.
92 Preservation of Anatomic Specimens.—O. prigotovlenii anat. museinikh preparatov. G. V. Shor.
93 To Finish Paraffined Sections, Mounted on Glass.—O technikye obrabotki paraff. sryezov, prikleenykh k steklu. Id.

77. **Splenectomy for Echinococcus Cyst.**—Kablukoff reviews the cases of splenectomy on record to date, a total of 278, according to his figures. The operation was undertaken in 79 cases on account of malaria, with 23 deaths; in 94 on account of idiopathic hypertrophy, with 38 deaths; in 29 on account of leukemic hypertrophy, with 26 deaths; in 32 on account of displacement of the organ, with 2 deaths, and in 4 on account of cancer, with 1 death. Only 9 cases of splenectomy on account of echinococcus cyst are known to him, one of the number having been reported by a Russian surgeon. Kablukoff reports another successful case of this group. The patient was a woman of 36, and the affection had been diagnosed as a sarcoma of the left kidney. In 6 other cases he merely evacuated the cyst in the spleen by Lindemann's technic, with good results in all.

80. **Complications of Aneurism of Aorta.**—Reisgoff describes with great detail the clinical and postmortem findings in a case of aneurism of the aorta complicated by thrombosis with obstruction of numerous arteries. The patient was a man of 36. The case shows that obstruction originating in the arch of the aorta does not necessarily cause serious disturbance in the nutrition of the tissues previously nourished by the obstructed arteries in the neck, the carotid, subclavian and innominate. Collateral circulation develops, and the organism soon adapts itself to the altered conditions. In the present case the aneurism was in the descending aorta and in the arch, and the left carotid artery was found completely obstructed, also the mouth of the right coronary artery, while the left innominate and subclavian arteries with ramifications were only partially obstructed.

85. **Extragenital Syphilis.**—The patient in the case reported was a young woman of good family, who presented a chancre on the lower lid, followed by the symptoms of constitutional syphilis. When on her wedding trip a chambermaid noticed a stye on the bride's eye and offered to cure it by rubbing it. She used her saliva-moistened finger, and the result was the transformation of the stye into a syphilitic chancre, followed by the symptoms of constitutional syphilis.

88. **Tumor in Cerebellum of Boy of 9.**—Vinokuroff reviews the literature on the subject of tumors in the cerebellum before giving the particulars of his case. Headache, vomiting and indications of congestion in the fundus of the eyes were all the symptoms observed, but at the autopsy a large solitary tubercle was found in the left half of the cerebellum, with caseous degeneration in the center.

89. **Differentiation of Noma.**—Kissel's article is based on a material of 46 cases collected in the course of eleven years. There was a history of preceding measles in 25, of typhoid fever in 4, of dysentery or whooping cough in 2, and of double pneumonia in 1 case; the antecedents were not known in 12 cases. Ulcerative stomatitis developed as an independent process in most of the cases. The first signs of the affection are slight swelling of the cheek with very little pain or congestion. The infiltration shows a very hard center, feeling like cartilage. In some cases the gangrenous process develops in the bones of the face, the perforation of the cheek not occurring until just before death. In ulcerative stomatitis Vincent's bacilli and spirilla are found in great abundance, but they are scanty or absent altogether in case of true noma. In none of Kissel's cases was there a transformation of ulcerative stomatitis into noma. He urges the importance of careful, daily examination of the mouth in all children debilitated by an acute infection. If this is done systematically, then cases of noma will be detected in the incipient stages. In rare cases the destructive process may affect the bones of the face without involvement of the skin. In one case he was called in consultation to see a little girl of 10 with typhoid fever. The surroundings were hygienically of the best and the child had been under constant medical supervision. He examined her mouth and found an unsuspected extensive gangrenous process in the soft part over the alveolar processes in the right upper jaw and roof of the palate. In another case, a girl of 5 lived in a neighborhood where there had been several cases of ulcerative stomatitis. She developed a gangrenous process in the cheek which did not reach perforation, but otherwise was typical noma, terminating in recovery. As a rule, he found the lymphatic glands less involved in noma than in ulcerative stomatitis.

90. **Operation for Symblepharon.**—Pravosud thinks that all methods of remedying symblepharon have so many defects that a new technic is desirable. He advocates a plastic operation which consists in making a horizontal incision to enlarge the interpalpebral slit to the edge of the orbit on each side. Two incisions are then made downward from the ends of the horizontal incision, at right angles to the first incision, for a distance of 1.25 cm., slightly converging below. A knife is then passed through the lid from one of these perpendicular incisions to the other, forming a flap whose base is parallel to the interpalpebral slit, while one side follows the base of the nose and the other corresponds to the outer side of the orbit. A piece of mucous membrane is then taken from the cheek and fitted over the raw surface left as the flap is turned down. The upper edge is sutured to the eyeball and the lower edge to the edge of the turned-down flap. Three loop stitches are then taken through the applied flap and the lower lid at the base of the flap. These loops hold the mucous membrane down to form a conjunctival sac, and are tied outside of the skin when the lower lid with its new lining is turned back and sutured in place.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

SEXUAL NEURASTHENIA (NERVOUS EXHAUSTION). Its Hygiene, Causes, Symptoms and Treatment. With a Chapter on Diet for the Nervous, by G. M. Beard, A.M., M.D. Edited with Notes and Additions, by A. D. Rockwell, A.M., M.D. Sixth Edition. Cloth. Pp. 316. Price, $2.00. New York: E. B. Treat & Co., 1905.

LABORATORY GUIDE IN EXPERIMENTAL PHARMACOLOGY. Directions for the Course Given in the University of Michigan. By C. W. Edmunds, A.B., M.D., and A. R. Cushny, A.M., M.D. Cloth. Pp. 246. Price, $1.50. Ann Arbor, Michigan: George Wahr, Publisher.

GENITO-URINARY SURGERY AND VENEREAL DISEASES. By J. W. White, M.D., and E. Martin, M.D. Illustrated with 300 Engravings and 14 Colored Plates. Sixth Edition. Cloth. Pp. 1092. Price, $6.00 Philadelphia: J. B. Lippincott & Co.

MINOR AND OPERATIVE SURGERY INCLUDING BANDAGING. By H. R. Wharton, M.D. Sixth Edition, with 532 Illustrations. Cloth. Pp. 650. Price, $3.00 net. Philadelphia: Lea Brothers & Co., 1905.

OIL WELLS IN THE WOODS. By J. C. O'Day, M.D. With Illustrations by Miss Ethel Farmer, and Photographs Collected by the Author. Cloth. Pp. 359. Deposit, N. Y.: The Oquaga Press, 1905.

TEXT-BOOK OF MATERIA MEDICA FOR NURSES. Compiled by L. L. Dock. Fourth Edition, Revised and Enlarged. Cloth. Pp. 330. Price, $1.50 net. New York: G. P. Putnam's Sons, 1905.

STUDIES FROM THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH. Reprints. Vol. III. 1905. Paper. New York: Rockefeller Institute for Medical Research.